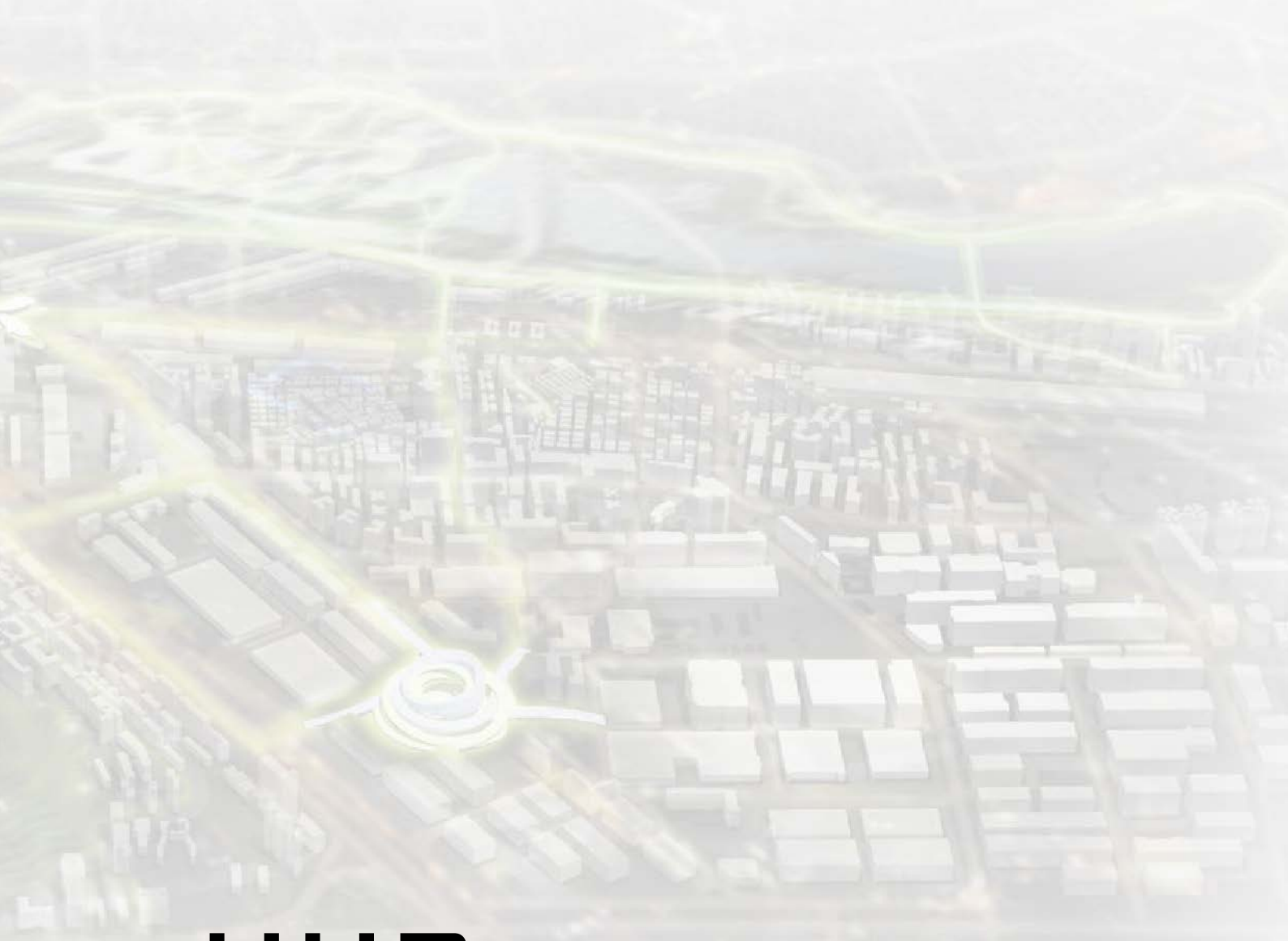


HUB it

RESILIENT STRATEGY FOR CREATING VIBRANT URBANITY IN QINGSHUIHE

ANNA HEIKKILÄ
DIPLOMA WORK
TAMPERE UNIVERSITY OF TECHNOLOGY

HUB it

RESILIENT STRATEGY FOR CREATING VIBRANT URBANITY IN QINGSHUIHE

TAMPEREEN TEKNILLINEN YLIOPISTO

Tampere University of Technology
School of Architecture

Anna Heikkilä
Master's thesis

Examiner: Professor Markku Hedman
May 2015

THANK YOU

Professor Markku Hedman for your professional and encouraging guidance. You helped me to display a competence that I did not even know existed.

Thank you to my family who has always believed in me and has been there for me no matter what has happened.

Thank you to my friends Noora Pihlajajärvi, Janni Heikkilä, Milla Rusanen, Sonja Tilaeus and Johannes Aho for endless support, patience and excellent feedback. I would also like to thank Heidi and Konrad Nyblom for the precious time they put into making my language understandable. Moreover a special thank you to Anna Pajulo for empathy the same situation of working with the thesis and understanding me.

Thank you to the thesis workshop for the convenient instruction and for the comments that broadens even my own perspective in regards to the topic of my thesis.

I owe the greatest thanks to Tuomas for his continuous trust in me and for his ability to remind me that I can do it over and over again. I did it and you helped me to do that, thank you.

ABSTRACT

TAMPERE UNIVERSITY OF TECHNOLOGY
School of Architecture

HEIKKILÄ ANNA: HUBit - Schindler award 2015 in Shenzhen
Master's thesis 85 pages
May 2015
Supervisor: professor Markku Hedman
Keywords: Architecture competition, Access to urbanity, Design city as a resource

This master's thesis has been done through participation in the Global Schindler award 2015 that takes place in the Shenzhen suburb of Qingshuihe. The competition set the aims and goals for the project that has been deemed adequate requirements for the thesis by the supervisor. This thesis studies the issues of megacities' city structures in Asia and particularly China where city space is commonly enclosed and introverted, lacking both public spaces and human scale connections. The competition's theme, access to urbanity, refers to the main goals of mobility and equal accessibility to vibrant city life.

Shenzhen is China's major financial center. It was transformed in late 1979 from a small fishing village with 20 thousand habitants into a metropolitan area of 2 020 km² with a population of approximately 10 million people. It is an internationally important boarder city between mainland China and Hong Kong and acts as one of China's gates to the world. Shenzhen has developed rapidly into a Chinas first and most successful Special Economic Zone (SEZ). The exact competition site is situated in Sungang Qingshuihe (QS) and is a neighborhood of 2.5 square kilometers. It is situated 11km from the city center of Shenzhen and lies in between the political borders of the Special Administrative Zone of Hong Kong and the former frontier of Shenzhen's Special Economic Zone. Regional mobility is strong in SQ as the area was developed to be an important transit node for industrial products. Infrastructure and warehouses act as dominant characteristics of the area. But there are also topographical and hydrological elements that create both possibilities and on the contrary borders for the urban accessibility to develop. Thus, the existing social structure is diverse and complex but doesn't work as a whole nor provide equal quality of life or urban access for all.

My proposal, HUBit, is a strategic plan that is represented in this thesis. It focuses on developing the spaces between the built environment and creating new possibilities for citizens to move and explore the city. HUBit is an adaptable development strategy to create a resilient city structure. It consists of focus points that are places for hubs to be build and a mobility network that is activated by citizens interaction between the hubs and built environment. The strategy's main aim is to provide a socially livable and equally accessible city for the citizens of Qingshuihe.

TIIVISTELMÄ

TAMPERE TEKNILLINEN YLIOPISTO
Arkkitehtuurin laitos

HEIKKILÄ ANNA: HUBit - Schindler award 2015 Shenzhenissä
Diplomityö 85 sivua
Toukokuu 2015
Työn tarkastaja: professori Markku Hedman
Avainsanat: Architecture competition, Access to urbanity, Design city as a resource

Tämä diplomityö on tehty osallistumalla Global Schindler award 2015 -kilpailuun, joka sijoittuu Shenzhenin lähiöön nimeltä Qingshuihe. Kilpailu on asettanut työn tehtävät ja tavoitteet, jotka ovat sovittu työn tarkastajan kanssa sellaisiksi, että ne riittävät täyttämään diplomityön vaatimukset. Diplomityöni tutkii suurkaupunkirakenteen ongelmia Aasiassa, Kiinassa, missä kaupunkitila on sulkeutunutta, vailla julkisia tapaamispaikkoja ja ihmisen skaalan mukaisia yhteyksiä. Kilpailun aiheena oli kaupunkitilan saavutettavuus, johon liittyen päätavoitteet keskittyivät liikkumismuotoihin ja -järjestelmiin, joilla taataan tasa-arvoisesti saavutettavaa eloisaa kaupunkielämää.

Shenzhen on Kiinan pääfinanssikeskus. Se kehittyi vuoden 1979 pienestä kalastajakylästä tämänpäivän ensimmäiseksi ja menestyksekkäimmäksi erityistalousalueeksi. Shenzhen on kansainvälisesti tärkeä rajaseutu manner-Kiinan ja Hong Kongin välillä, ja toimii samalla Kiinan porttina maailmaan. Kehitys alueella on tapahtunut erittäin nopeasti pinta-alaltaan 2020 km² metropoliksi, jossa asuu noin 10 miljoonaa ihmistä. Nimenomainen kilpailukohde on 2,5 km² laajuinen alue Sungang Qingshuihessa. Se sijaitsee Hongkonging erityishallintoalueen ja Shenzhenin erikoistalousalueen välissä noin 11 km Shenzhenin keskustasta. Alue kehittyi tärkeäksi läpikulun ja lastauksen risteyskohdaksi, joten kaupunki on muodostunut infrastruktuurin ja rahtiliikenteen ehdoilla. Lisäksi alueen luonnetta vallitsevat teollisuushallit, joiden sekaan on sijoittunut vähäosaisten asumista. Luonto ja alueen topografia halkoo tieverkoston lisäksi aluetta edelleen lisää, mutta ovat kuitenkin alueen kehittämisen mahdollisuuksien kannalta merkittäviä tekijöitä.

Kilpailuehdotelmani HUBit on strateginen suunnitelma, jota selostan tässä työssäni. Strategia keskittyy kehittämään unohdettuja rakennusten välisiä tiloja kunniottaen olemassa olevaa rakennettua ympäristöä ja luoden uusia liikkumisen muotoja ja kaupunkielämän mahdollisuuksia. HUBit on muunneltava strategia, jolla luodaan joustavia kaupunkirakenteen ratkaisuja. Se koostuu polttopisteisiin sijoittuvista hubirakennuksista ja niiden ympärille muodostuvasta vuorovaikutuksen synnyttämästä liikkumisen verkostosta. Strategian päätavoite on luoda sosiaalisesti elävää ja tasa-arvoisesti saavutettavaa kaupunkitilaa kaupunkilaisten ehdoilla.

TERMS

A concept is an abstract idea or generalization behind the design process to achieve the goals under conditions of uncertainty.

A strategy is a plan of action designed to achieve a long-term or overall aim. However it is not fixed final plan but flexible for changes. (Oxford English dictionary)

A hub is a center of activity or interest; a focal point. In this work hubs reffer to the mixed-use buildings that connect people and places. (Oxford English dictionary)

Urban structure is the arrangement of land use in urban areas. It can also refer to the urban spatial structure, which concerns the arrangement of public and private space in cities and the degree of connectivity and accessibility. (Oxford English dictionary)

Urbanity reffers to the characteristics, identity associated with cities and urban areas.(Oxford English dictionary)

Urbanization is the physical growth of urban areas as a result of rural migration and even suburban concentration into cities, particularly the very large ones. It is closely linked to modernization, industrialization, and the sociological process of rationalization. (Oxford English dictionary)

Accessibility is the degree to which a product, device, service, or environment is available to as many people as possible. Accessibility can be viewed as the “ability to access” and benefit from some system or entity. (Oxford English dictionary)

Mobility modes influence the use, morphology and composition of built environment.” (GSA Competition brief 2015)

Mobility network is in this project the system that favour human scale connections and activity and that links people and places together. It act as a path that facilitates interaction along the way.

Non-place refer to anthropological spaces of transience that do not hold enough significance to be regarded as “places”. (Wikipedia) In this project many of the places between the building or between the roads,that not in use, are regarded as non-places.

Resilient is abouncy or flexible feature of a system or a process that is able to recoil or spring back into a shape after bending, stretching or being compressed. (Oxford Dictionary)

Adaptable refers to ability to be modified for a new use or purpose.(Oxford Dictionary) In this project it defines flexible and adjustable quality.

CONTEST

PREFACE

The prologue
Competition aims and goals
Competition material provided
Drivers for my work
The structure of the work
The process of the work

PROLOGUE

My diploma work, called HUBit, is competition proposal for the global Schindler award 2015 (GSA); “Access to urbanity: Design city as a resource”. The competition is held by the Schindler Group, in collaboration with the Chair of Architecture and Urban Design of Eidgenössische Technische Hochschule in Zurich. This open and anonymous idea competition challenges both Bachelor’s students in their final year and Master’s students with complex urban issues. The competition could be participated in as team or individually. I participated individually, even though the task was vast and burdensome, as the design proposal was my diploma work.

The competition engaged student responses in the form of urban design proposals to develop mobility and connections for everyone in Shenzhen and its neighborhood of Pearl River Delta. The exact competition site is an area of Sungang Qingshuihe that is an old industrial area to where residential and other such functions have spread even though human scale facilities have not been available. The competition task was concentrated on interfaces between mobility networks and the built environment of the city. The competition, as an idea competition, asks for “unconventional approaches, innovative urban strategies and architectural concepts for livable, mixed-use, high-density urban environments”. (GSA) Mobility was required as a main theme for creating accessibility, to be considered from both horizontal and vertical perspectives. GSA also underlines that the proposals should obey the concepts of trans-scalar, holistic and cross-border ideology. Also, in today’s world, sustainability obviously must be taken into consideration. The challenges of globalization and urbanization need solutions that follow the social, economic and environmental aspects in order to achieve a sustainably acceptable urban future. Consequently, innovative and unconventional mobility solutions for urban challenges in the global and shared future are welcomed.

This diploma work is rest on the Schindler Group’s competition that is agreed to be suitable to fulfill the requirements for a diploma work. The project presented is done to answer the requirements given in the competition brief on behalf of Schindler Group. Thus, the project, HUBit is fulfillment of a condition defined by the competition task and aims. Even the entry requirements of the competition, that demanded only two A0 panels, have been the guiding principle in providing pictures and material. Thus, the diploma work explains the project that is a proposal for the competition and is not worked further.

COMPETITION TASK AND GOALS

The Official Competition Task below is quoted from the competition brief provided by Global Schindler award 2015.

ACCESS TO URBANITY: DESIGNING THE CITY AS A RESOURCE

Competition Task

The task of the GSA is to design a desirable and possible future for the city district Sungang Qingshuihe (SQ). Based on the concept “Designing the City as a Resource” and led by the key theme of mobility, the GSA requires a holistic approach to design. The objective of the GSA competition is to reflect on how the future of SQ can be designed, planed and managed, with values that are not only based in economic considerations and forces. The task is to design spatial qualities and the essentials to provide a high quality of life for all the inhabitants of SQ. In all projects, access to urbanity for a diversity of users and their needs should be offered. The submitted projects shall provide responses, at different scales, to the following questions:

1. What is likely to happen in Shenzhen in the context of the Pearl River Delta?
What are the current trends and the anticipated development?
2. How should a comprehensive vision for Shenzhen be conceived and rendered?
What role does this vision foresee for the designated competition site of SQ?
3. What built forms and public spaces result from this vision,
and subsequently what does daily life look like?
4. How can this vision be reached? What design strategies are applied to achieve
an incremental transformation process from the status quo to the envisioned future?

The GSA competition asks for a phased design over thirty years. Demographic shifts should be forecast and clearly quantified as part of this phasing. Spatial responses to the competition task should use the following design approaches:

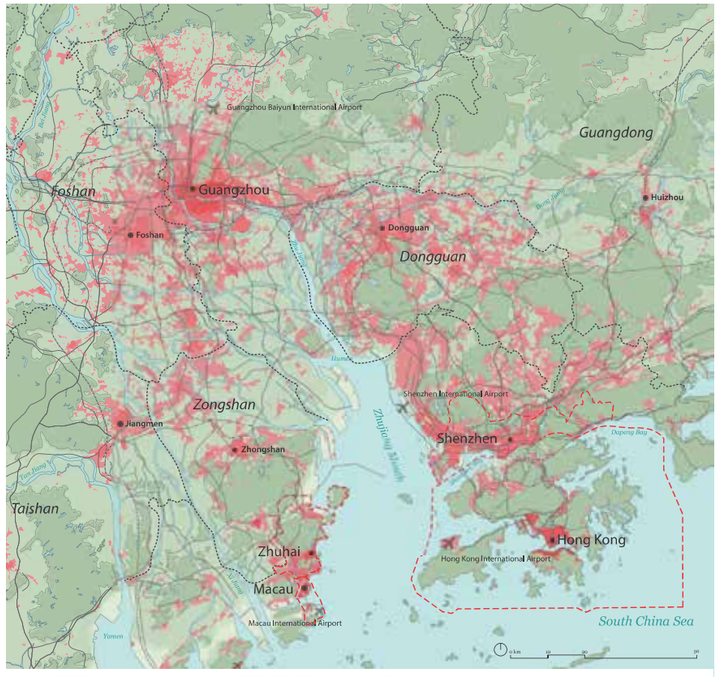
A. The Space In-Between as Design Focus: The mobility spaces, often thought of as the spaces between things, are to be understood not only as transit surfaces, but rather as a habitat and backbone for a functioning and livable city.
B. Design the Urban Space in the Third Dimension: The demand for high-density development suggests the ‘3D City’: through horizontal and vertical mobility, public and private spaces can be linked.
C. Synergies Between Major Investments and Small Uses: Major investments tend to finance large structures, yet small enterprises frequently appropriate these spaces.
This unplanned development must be addressed with anticipatory strategies.
D. Support Incremental Processes and Plan from the Stock: Beyond grand projects or master plans, urban strategies and tools can be used to control spontaneous processes and to allow the involvement of various stakeholders.

Designing a sustainable and livable future for SQ is only possible through the balancing and linking of social, economic and environmental aspects in spatial terms. In the best cases, competition entries could serve as inspiration for sustainable and resilient Chinese urban planning and design.

(Global Shindler Award 2015)

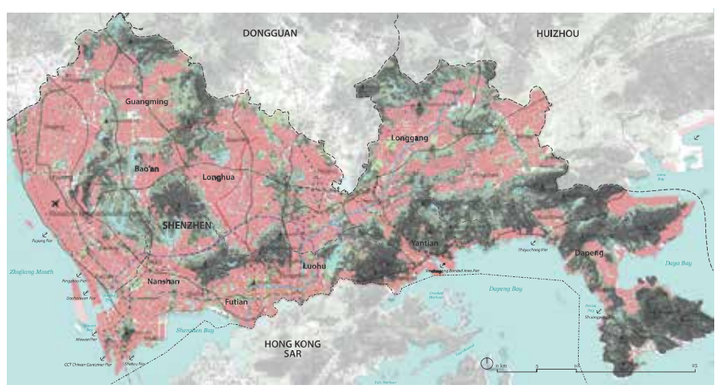
COMPETITION MATERIAL PROVIDED

This part indicates how vast and challenging the point of departure is with maps and pictures provided by the Global Shindler Group award 2015.



Overview Pearl River Delta

- administrative borders
- settlement
- water
- land reclamation
- mountains
- railway
- motorway



Overview Shenzhen

- administrative borders
- settlement
- water
- land reclamation
- mountains
- airport
- shipping port
- mountain
- 486 (metres above sea level)
- railway
- motorway
- metro lines

(Global Shindler Award 2015)

Weak city spaces due to rapid urbanization.







(Global Shindler Award 2015)

Possibilities for new city spaces.









(Global Shindler Award 2015)

City assets that need to be regenerated and better integrated to the urban city life.

(Global Shindler Award 2015)

DRIVERS FOR MY WORK

In this part I present the arguments for the solutions provided in my work. I clarify the ideology behind the project by introducing the theories that motivated me in developing the strategy for creating better city life in Shenzhen. The competition goals meet the challenges of today's cities that only consume everything without giving anything back to the future. "Design city as a resource" indicates that the city should not only consume resources but also provide them. The idea is that by linking people, goods and information in urban space, the city is more beneficial on a cultural, economic or political level to itself and to its people. Access to urbanity also calls for creation of vibrant urban life in Shenzhen that involves designing a fertile and diverse environment rich in relationships between people and the city itself.

Urbanization as a product of human settlement does not, in most cases, result in urbanity. Rapid urbanization is problem in China in general and specifically in Shenzhen it has lead to unpleasant and monotonic urban structures that consist of separate buildings rather than a whole built environment. Urbanity, according to GSA, is a qualitative urban structure that is accessible, usable, adaptable, central, appropriates stakeholders, and is both interactive and diverse. GSA also proposes that ideal urbanity starts with a density of a human interaction in public spaces that generates exchange and friction and consequently, competitiveness and progress. In the best case scenario, this process leads to tolerance, cultural diversity and innovation.

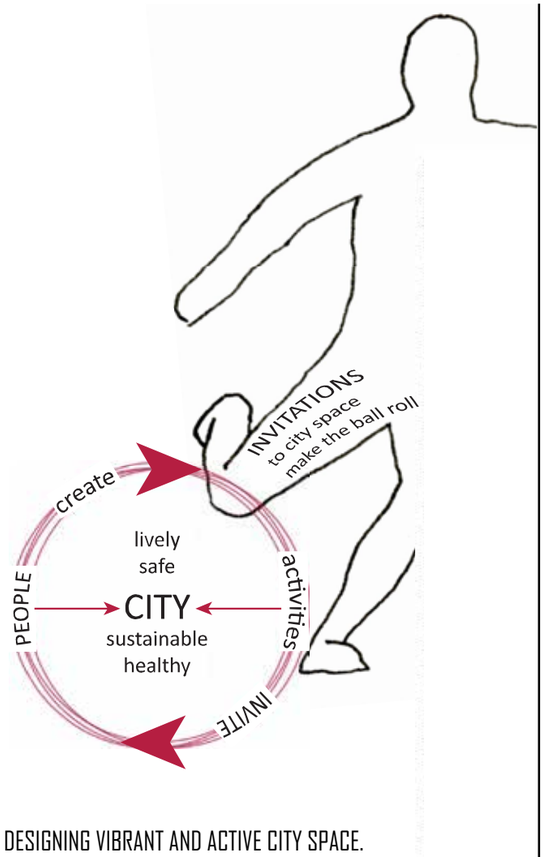
In China today, even though the city is open to everyone, it does not take a stand for public spaces. In order to get the process of urbanity to evolve, common public spaces are needed. The essential challenges being faced in city structures are lack of human scale movement and activities on the ground level, long distances that increase car traffic and monotonous, unrecognizable environments that create hard boundaries with the spaces in-between in the city. The Chinese way of living is somewhat introvert because of the community oriented culture. The closeness of small communities is reflected in the places citizens do not inhabit. The spaces in between the buildings are neglected as they are not valued equally with inside space.

The challenge provided by Global Schindler Group met all of my own requirements and ideas for my diploma work, and then some. Sustainability and accessibility have long been themes that I hoped to explore in my diploma work. With the help of the competition, I've gained the context and setting to realize and explore these themes. In addition, I'd also hoped to be able to submit my diploma work in the form of a competition entry, because it comes with a deadline and guarantees that the subject is timely. In this case it has been both challenging and relevant on a global scale in a very interesting context. The goals of creating an interactive and sustainably built future are near to my heart, and I have also wanted to force myself out of my comfort zone during the diploma work. This competition was the perfect answer to my needs and desires as I knew nothing about Chinese culture or its design principles, and was thrust onto a clean slate and into a cultural learning experience. Moreover, this was a very interesting and challenging foray into large scale urban design as I have, until recently, been more involved in housing design as the focus of my studies.

However, I did work for four months as a town planning designer and found a passion for urban design in realizing that it's not enough to design separate nice buildings but the whole environment needs to be planned in advance and accordingly. My goals and interests changed during my time as a planner, shifting toward urban environment design. It occurred to me that in the big picture of city structure the spaces between the buildings mean more and affect city life and its atmosphere more than any single piece of high-end architecture.

To improve my understanding of Asian culture and design principles, I studied Sara Nieminen's master thesis that gave a detailed explanation of how the building culture in China is and where it derives from. In China there is great deal of building regulations with which I was not familiar, for instance that building must be placed on a south-north axis. The other big difference in Asian cultures is the idea of open spaces. China is a socialist country, but their way of thinking and living is very introverted. Their city structure is divided into closed inside spaces while open city space is left outside. Even the housing areas in China are closed by gates to provide separation from the open public spaces outside. They do not have the same connection between these two types of spaces that we have in the Western World. I wanted to integrate the public space that is needed to create vibrant city life with this contrasting culture. This inspired me to create these hubs to combine the indoor space and outdoor public space in order to get people to realize and appreciate the important part that public spaces play in city life, and hopefully, making a move towards breaking down the barriers between indoor and outdoor, and private and public spaces in China.

In this project, human-oriented and adaptable design solutions, human-scale activity and sustainable values are prioritized in generating the development strategy, HUBit, for Shenzhen. I believe that it is the people who bring life to the city. Thus, as designers we need to deliver adaptable spatial and functional possibilities that fulfill the needs of people and that enable people to realize a more fulfilled and joyous everyday life in the city.



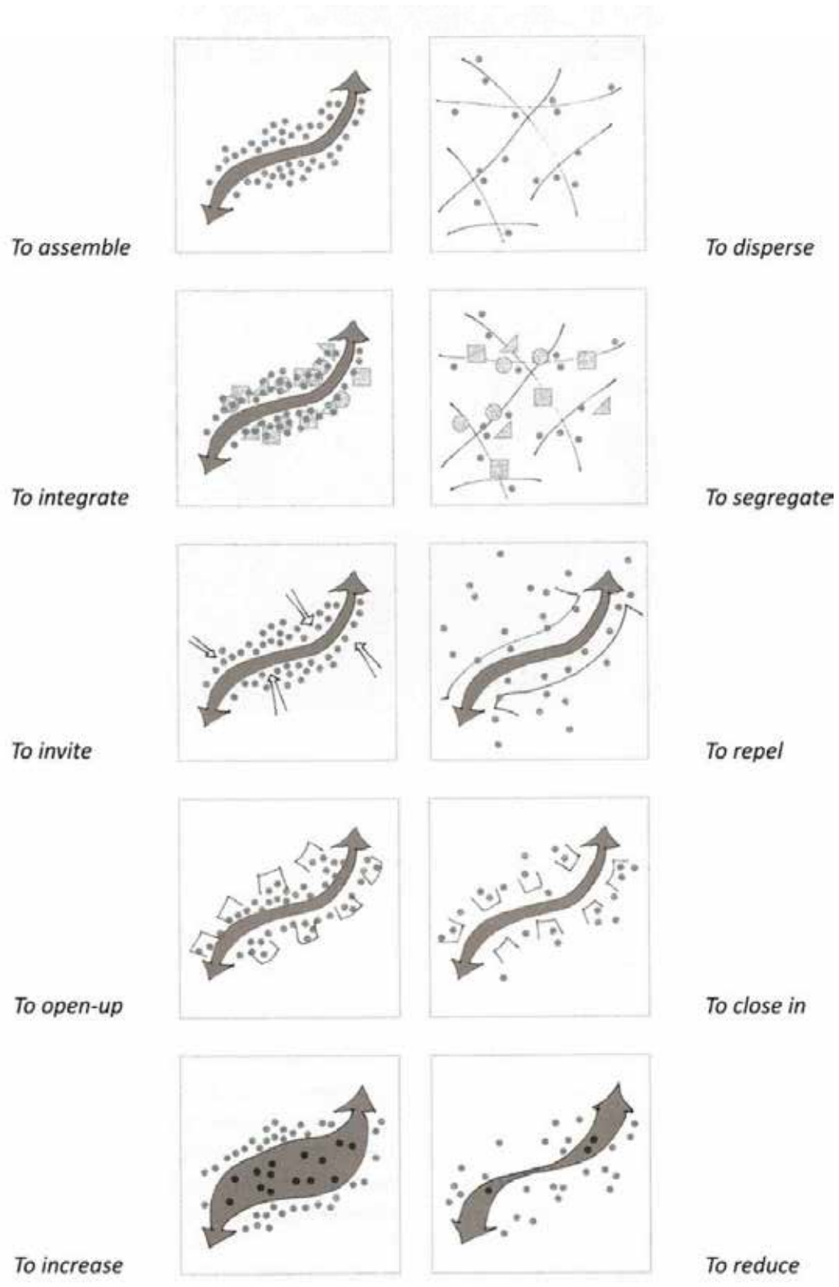
DESIGNING VIBRANT AND ACTIVE CITY SPACE.
Inviting people to city space by improving human scale lies at the heart of Gehl's theory. (Sara Nieminen, 2012, s.77, based on Gehl, 2010)

It was only natural for me to follow Jan Gehl's human-oriented and city life strengthening principles introduced in his book, Cities for people. His theory derives from the fact that the people are the greatest attraction in any city. City spaces should return to human-scale and act as spaces that are meant to support human activities. Jan Gehl encourages planners to invite people to the city in order to achieve lively, safe, sustainable and healthy city structures. An understanding of human dimensions is the key principle needed to lure more people to the city. Consequently, this leads to a more active and vibrant city life which, in the end, leads to better city. Charles Montgomery, another mentor for my design ideology, also refers to the benefits of human scaled design in his book, Happy City. His observations and teachings are based on descriptions and analyses of city planning solutions in different contexts all around the world. Both Montgomery and Gehl speak for a combination of improvements to the circumstances of pedestrians, cyclists and everyday city life in general. In order to improve city quality, planners need to acknowledge senses and speed of the movement suitable for humans; not for machines such as cars.

Both Montgomery and Gehl also agree that the principles of a lively, safe, sustainable and healthy city create a self-strengthening hierarchical system where every principle is affected by and affects the other principles. At the core of these principles is the need to improve the pedestrian experience. Charles demonstrates this by mentioning the city of Copenhagen, a city which is commonly agreed to be an attractive and vibrant city mainly due to the fact that cars are not allowed to drive in the center of the town, which is mostly designated to bikers and pedestrians. Gehl, however, demonstrates how physical features and limitations in spaces affect people and the way they experience the spaces. According to him, being inviting is about having no walls, keeping distances short, lowering the speed, keeping action on one level and emphasizing face-to-face orientation. His principles of city planning for people consist of: assembling, integrating, inviting, opening up and increasing. He believes that a mixed-use, cohesive and logical city structure is a good base for generating vibrant city life.

PRINCIPLES OF PLANNING CITIES FOR PEOPLE

A mixed-use, cohesive and logical city structure is a good basis for city life. (Gehl, 2010)



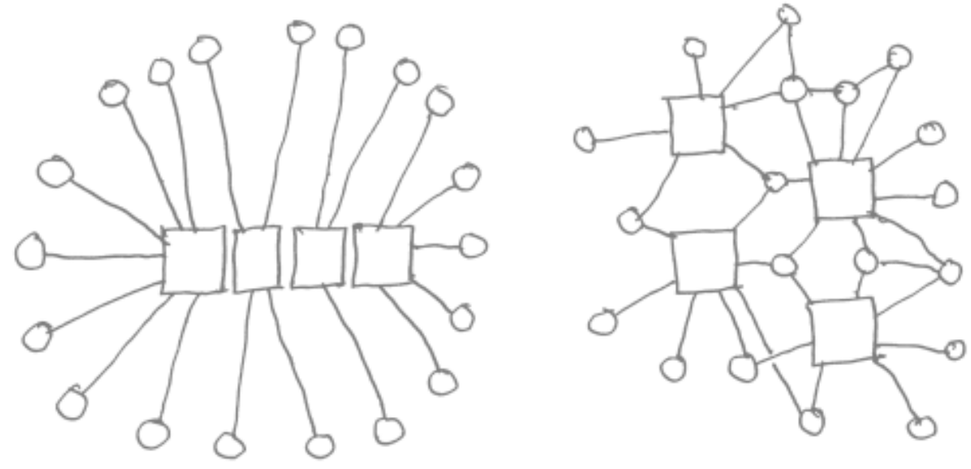
To get further perpective, I also studied another way of approaching the challenge of creating a lively city. “A city needs to be understood as a complex interacting system.” argues Nikos Salingaros in his book, Principles of urban structure. I applied his thoughts of the city as a network when defining the mobility systems. A network, according to Salingaros is a constantly moving and adapting system that combines patterns on urban interfaces, creating a coherent city that assembles its components hierarchically. I, however, do not believe that everything can be adaptable and changing all the time, but the movement of people is largely unpredictable. So the network that I introduce further on is resilient system of movement that follows people’s activity and needs.

In my opinion, ideal urban complexity is achieved with the combination of a totally free system, the mobility network; which interacts with stable factors, or hubs; that create identity and a recognizable environment with which citizens can familiarize themselves. I follow Franz Oswald’s and Peter Baccin’s basic ideas about networks that consist of nodes and connections between them that they represent in their book, Netzstadt. They present an interesting idea, likening the city to a three dimensional system of nodes and connections. The concept for creating a resilient strategy in improving Shenzhen’s urban environment derived from this network idea, but I did not want to go too deeply into this field as my priority was human-oriented design rather than in totally theoretical paradigm.

The work truly represents the design ideology that I have discovered along my journey to becoming an architect. I believe that we, as planners, can offer people spatial qualities that can make a difference whether the scale is small or large, or in urban or housing design. I also hope we can lead people to realize that sustainable solutions don’t necessary mean a less pleasant everyday life but on the contrary, a more vibrant and cohesive urban structure.

STUDYING THE NETWORK SYSTEMS

On the left, drawing of an over-concentration of large-sale components that provides less alternative and correlating connections. On the right, a more resilient and distributed network of nodes that is obeyed in this project.
(The biological basis of resilient cities, Michael W. Mehaffy & Nikos A. Salingaros)



THE STRUCTURE OF THE WORK

My main focus in the diploma work was in the competition proposal for the Global Schindler award 2015. In this diploma work I reflect on the competition task and aims and my design work and finally analyze how I managed to achieve the aims. I have divided the work in three parts. Part one is about the background, analysis and conclusions of the analysis; the second part handles the concept; and the third part focuses on explaining my design proposals.

WHERE?
The site introduction - Site analysis - Conclusions for the concept

Competition tasks and goals quoted from the Global Schindler award competition brief.
Introducing the context and analyzing its weaknesses, strengths and possibilities.
Concluding analysis by summing up the most important issues found in the analysis for developing the area in question.

WHY AND WHEN?
Concept - Strategy - Temporal dimensions

Conclusions lead to the concept called HUBit.
Explaining the concept and the requirements of the tasks.
The concept in time and space result in strategic plan.
Defining the resilient strategy and explaining how the plan achieves the aims and goals in the future.

HOW, WHEN AND WHAT FOR?
Design proposals - Time spheres - Network

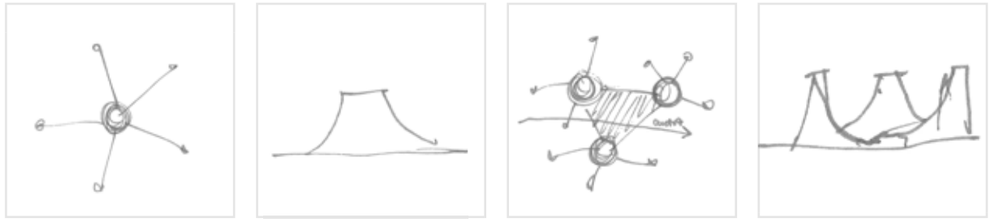
Describing example of design composition in site according to conclusions of site analysis to show how the concept HUBit could work and create resilient strategy for future development.

PROCESS OF THE WORK

I first heard about the competition in June 2014, and became even more interested as the time came for me to start my diploma work. Becoming acquainted with the details of the competition, I found it to be in line with my personal ideas and goals for the theme of my diploma work. However, I began to have doubts about entering the competition upon understanding the workload. I finally made a decision to buckle down and get it done, as this type of deadline is the best test to prepare for working life in an architecture firm.

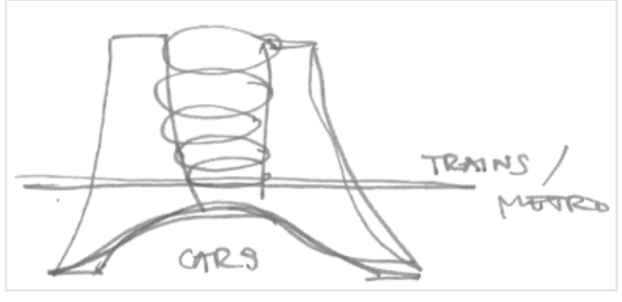
In October, I began to analyze the site, sketching possible concepts for the mobility network. As I acknowledged that the context of the site would require cultural or local understanding, I concentrated on spaces between the existing buildings to honor the built environment. Consequently, those non-places that I decided to concentrate on had the greatest need for development, in order to create an equally accessible and active city life for Sungang Qingshuihe. Finally, in the analysis phase, I separated the site into parts by creating themed zones and tested different combinations of layers and zones, looking for the missing link or any pattern in the chaos. In the end, I found correlation between zones of different functions. I found the point where the zones overlapped, and those became the starting point for my concept. My strategy derives from the planning ideology focused on analyzing of the task, aims and site in context.

MY EARLY STUDIES OF THE STRUCTURE AND VOLUME



On the right, there is a sketch of single mass as a hub. On left there is sketch of hub, which is composed of multiple volumes. Sketches study the benefits between single mass or many masses surrounding a public living room in order to provide pleasant spaces for social interaction.One single volume spreads out into to its environment and creates public space around it but is slightly monotonous and megalomaniac. Multiple volumes around the point of overlap create more variable city space and collect people more effectively.

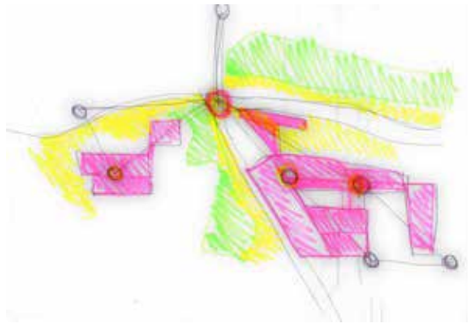
FINDING FUNCTIONAL PRINCIPLES



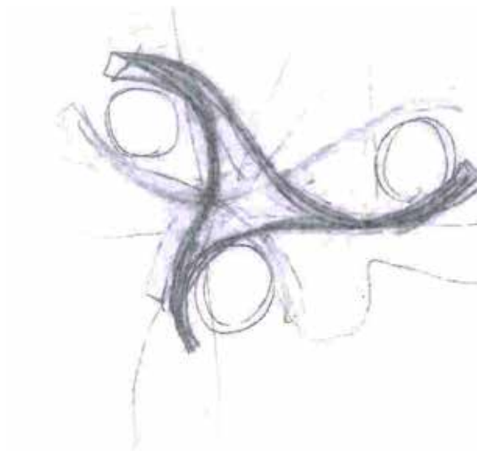
As focusing the spaces in between the built environment, it resulted in that all hubs in my proposal are situated above car roads. Early sketch studying the functional principles as the building is situated above the road. These drawings search solution for connecting transportation and infrastructure with people and city life. From the beginning of the process the idea behind hubs lied more in functional aspects that building design.

I figured out that by only improving one point in the vast area, I wouldn't be able to defend my concept as a solution for the entire site. However, the overlapping point held extreme potential in that it was a crossing point between not only the programs of the site, but also the different transportation types, tying into the global mobility network surrounding the site. Continuing to explore the competition material, I searched for a strategy that would provide equal access to both the city and mobility network to all citizens. Soon I found out that city of Shenzhen has defined certain areas as "unstable", and it was there that I found my answer. These unstable areas are much more prone and ready for transformation that the areas considered to be "stable."

Therefore, these so called "unstable" areas that are non-places in the city provide perfect blank slates to become centers for new hubs. These unstable non-places situated beneficially relatively close by the overlapping point, where the development strategy HUBit started, enabling human scale connections to evolve between the main hub and these new hubs. Anyhow these presented locations for the new hubs are only an example of how and where the development could lead from the overlapping point being the starting point for the recreation.



SKETCHES OF LOCATIONS AND CORRELATIONS
Sketch where the development zones are localized with the other zones. Residential areas marked with yellow, development in pink and green areas with green. The spots marked with circles studies the possible places for interactive centers.



Sketch where three focus points are pinpointed according to the analysis. The area of influence and connections between these points is studied. The picture illuminates three hubs acting as an entity.

Finally I had figured out a way to develop a strategy that answers the competition demands but also fulfills my goals to create something that is resilient to future changes and enables citizens to form surroundings that suit their needs. The aim was to create a platform from which the development can continue naturally. The concept of hubs and connections evolved into a strategy that creates social and cultural assets and green accessibility for citizens.

The next step was to make this thought understandable for others as well as for myself. I started to clarify the concept by making diagrams that simplified the various ideas around the concept. And this work continued till the end of the project. Diagrams were a key tool to present my work as a resilient and adaptable strategy that isn't locked to any specific place within the site. I did not want the project to be an ultimate master plan that leaves the culture and citizens out of the development process, as it's not a culture that I know enough about to make decisive leaps. My design proposals must include a system that makes sense and that I believe in.

To conclude my competition proposal I designed volumes for the hubs at the focus points that I found during my analysis. I tried to identify the surroundings from the pictures and maps given by The Global Schindler Award. I could not use Google Maps because it does not work in China and I could not visit the site, so I accepted the situation and made the most out of what I had. But this was my diploma work so only the maps and conceptual diagrams were not enough to show what I needed to show. I wanted to present the images that I had in my head that correlated with the hubs and life around them. So after the concept I decided to illustrate an example of how the strategy could work on the site and propose some new mixtures of functions. The design process was the adventurous part and my design proposals, due to my Scandinavian background, may be something new in Shenzhen that will interest people. In the end, I was really pleased about making the decision to complete the task, and being able to do something really massive and crazy as my final work during my school career. It was actually much harder to let go of all the practical learning and just realize the sentimental atmosphere in question.

The proposed strategy is resilient in order to be able to adapt for citizens' needs in time and space. As for the design solutions of hubs, they connect people, places and mobility together and create identity for the places that are now neglected or overrun with traffic. My design proposal is just one example of showing how the concept of HUBit could work, but I believe that the strategy works in different places within the site as well.

1 FRAMEWORK

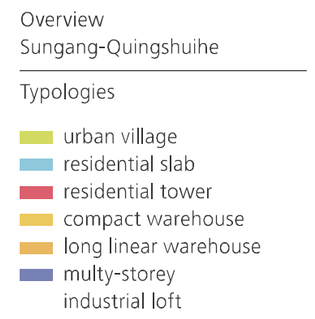
1.1. INTRODUCING THE CONTEXT

The competition takes place in a major city in the south of China's Guangdong province, called Shenzhen. It is situated immediately north of Hong Kong in the area of the Pearl River Delta. Shenzhen was transformed in late 1979 from a small fishing village into China's first and most successful Special Economic Zone (SEZ). It was designed as an experimental field for the socialist market economy and export oriented industrial production. Shenzhen is internationally important border city between China and Hong Kong and acts as one of China's gates to the world. Shenzhen has developed rapidly into a one of the most built areas in the world. Shenzhen is a metropolitan area of 2020 km² and has a population of approximately 10 million people, and the area of the Pearl River Delta has over 44,7 million inhabitants spread out over nine municipalities and an area of 17 573 km2. Shenzhen is China's major financial center, home to Shenzhen's Stock Exchange and also to the headquarters of many high-tech companies. Shenzhen's vibrant economy enabled by foreign investments resulted in a modern cityscape but the city that emerged as result of rapid industrialization fell short of providing equal access to all or a sufficient living standard. This growth and industrialization have also attracted large numbers of immigrants looking for a better life, but many immigrants lack access to proper housing, transit connections and public amenities.

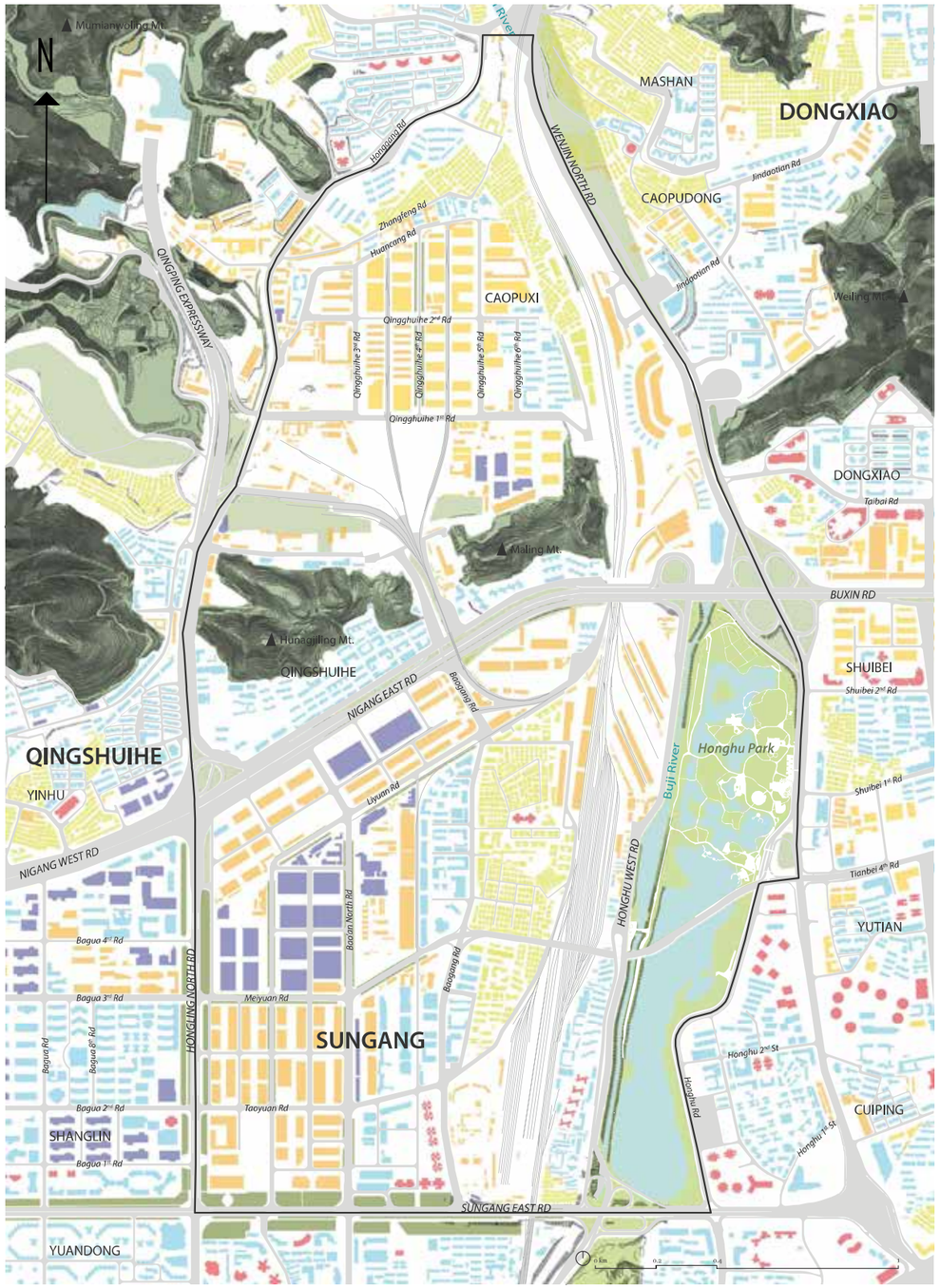
The exact competition site; a neighborhood of 2.5 square kilometers, is situated in Sungang Qingshuihe that is sub district of Louhu district and that has 100 000 inhabitants. It is one of the oldest sub districts in east Shenzhen, situated in between the political borders of the Special Administrative Zone of Hong Kong and the former frontier of Shenzhen's Special Economic Zone. Regional mobility is strong in SQ as the area was developed to be an important transit node for industrial products. Merchandise transits through the area toward either mainland China or to Hong Kong. As a result, the regional characteristics consist of infrastructure as a dominant urban tissue and warehouses as a dominant building typology. By prioritizing major train lines and high ways, the natural landscape has been destroyed during the process of industrialization. The only preserved landscape areas can be found where infrastructure prevents construction, for example, under the high voltage electricity lines. In SQ there are topographical and hydrological elements such as a chain of hills and the Buji River that create both possibilities and borders for the urban accessibility to develop. There are lots of street trees and even the national park area but they don't work together to create a network of green. A small amount of the residential areas that include gated communities and residential skyscrapers can be found, but the majority of inhabitants live in poor conditions in urban villages. However, these villages are still the most important entry point for immigrants into the economic and social life of the city, as it usually goes in mega cities. So the existing social structure is diverse and complex already, but does not provide equal quality for all.

As a result of rapid urbanization in SQ, the site is suffering from poorly organized large scale streets with little human scale urban space. The area is 'back to back' orientated and lacks vibrant urban nodes that invite human scale activity. It is ruled by non pedestrian monotony, with roads that are dominated by high speed passive movement rather than allowing for human scale movement and common spaces. High speed roads act as walls of isolation and increase distances within the city structure. To invite human scale activity, walls must be torn down. The speed of streets should be lowered to allow some of the focus of mobility to be shifted to pedestrians. Metro stations around the site fail to connect people and places. Adding transport nodes would free up transportation within the city structure and ease mobility issues. By investing in the site's transportation infrastructure, mobility to, from, and within the site can start to arouse.

As Shenzhen is still one of the world's fastest growing cities, the future in SQ will be less focused on the merchandise being exported and more focused on the importance placed on human values and life in the city. According to the Schindler award competition's information, SQ's future will improve through three influences. The first indicator that is thought to be improved is the public transport from the site to the city. Secondly, potential future development could lead the rapid growth dynamics into the whole Pearl River delta area. Third, the expansion of the city center of Shenzhen and Chinese Special Economic zone could affect Shenzhen's role in the geo-political and economic contexts. Due to the location of SQ in the network of the Pearl River Delta, it could become an important bond between Shenzhen's city center and it's periphery as well as to the rest of the China and Hong Kong. Through the wide range of existing mobility nodes, SQ is expected to become better connected, and therefore, new urban components will hopefully arise and improve its centrality and value. More diverse range of the living and working population ought to develop through the connections to mobility infrastructure. Thus, SQ has all the components for a change to gain better density and uses of neighborhood. Components just need to be linked and reorganized.



(Global Shindler Award 2015)



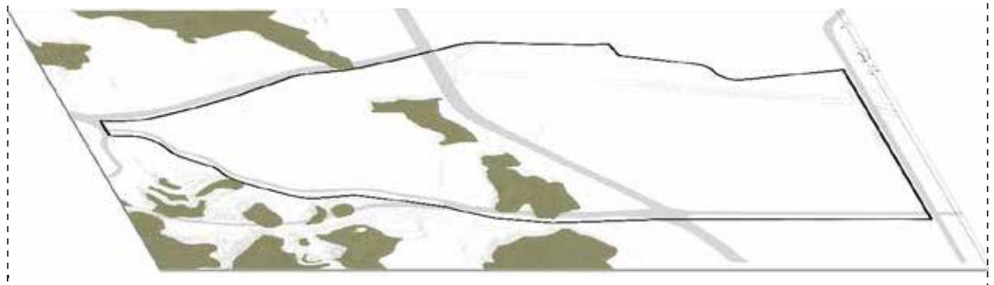
1.2. SITE ANALYSIS

The analysis is an interpretation of the situation in the site in four different categories. Here, I point out the layers found in the site that are relevant for the development.

GREEN SPACE ANALYSIS

N

Parks and **other green spaces** can be found on the site but the green belt lacks safe human scale and connection to the urban everyday life. The green spaces cannot currently be safely accessed from residential areas.



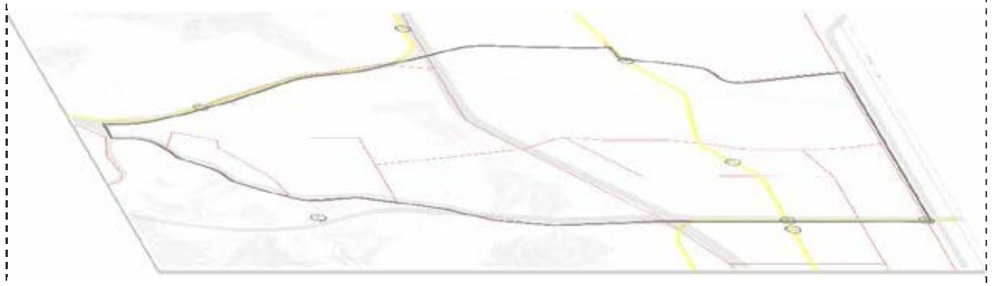
Topography (mountains) creates local identity and nice hiking paths but currently only isolates sites into two parts rather than being part of a versatile city space.

Green zone that consists of mountains and parks that are convenient for the site's development. The green zone needs to be connected to urban structure as an active green belt.

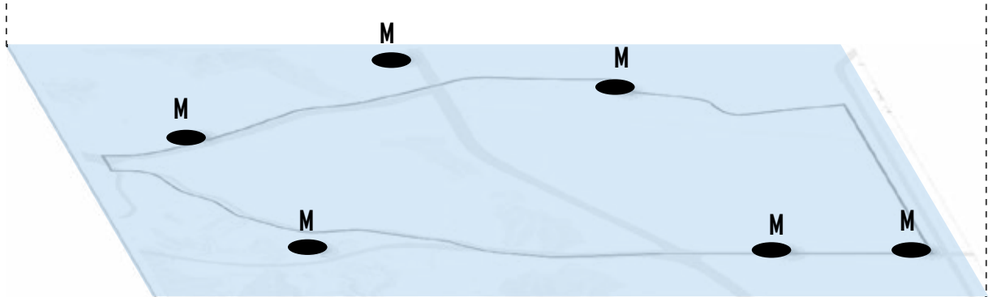
TRANSPORT SITUATION NOW IN QINGSHUIHE

N

The site is dominated by large scale streets that create long distances between city nodes and unpleasant city life along the roads. They divide the site into isolated areas with hard borders which lack pedestrian connections.



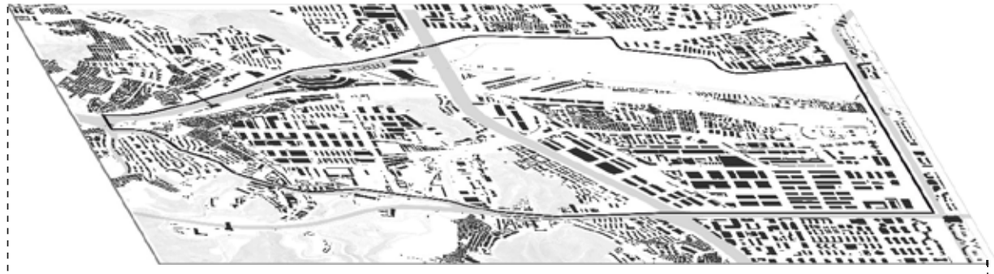
Mobility systems exist in the site, but do not integrate well with urban city life or provide access for citizens to urbanity. Bus or metro stops are distant from residential areas and are not safely reachable.



Exsisting metro stations are the only transport nodes that are situated near the site. Nodes should correlate to the site's mobility within or out from the site to in order to establish an accessible urban structure.

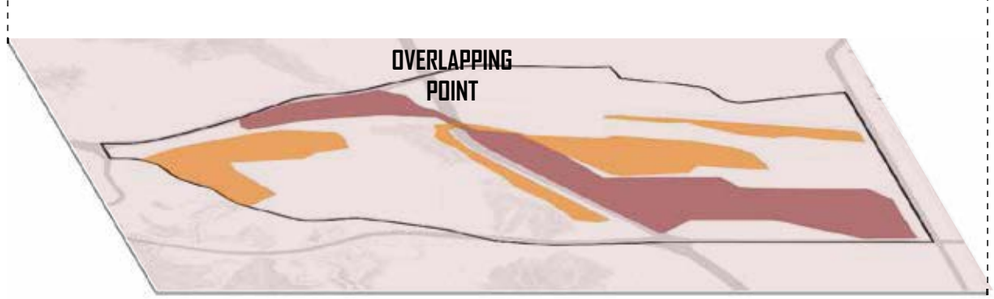
RELEVANT PROGRAMS IN THE SITE

N

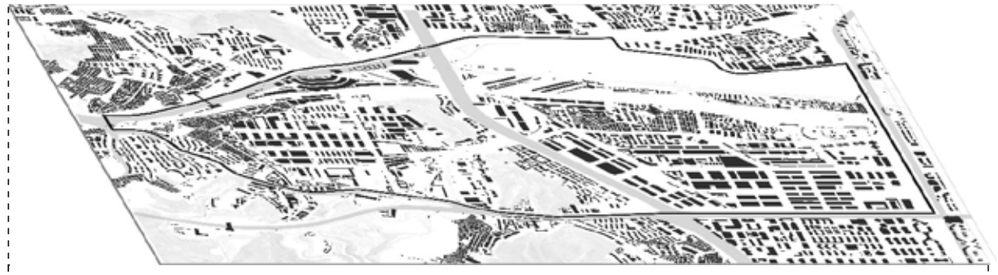


The general urban built structure which has developed according to mobility and topography.

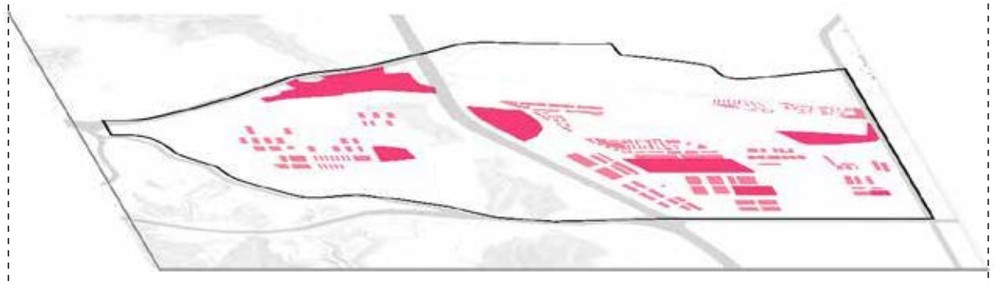
Displacement of functions reveals that site is densely developed in places and that different functions exists, industrial warehouses residential but they do not correlate to each other or mix very well.



Commercial zone **residential zones** are optimal areas for human scale motion and activity to start developing in the urban structure.



The granulation of buildings does not tell much but when one finds the programs for the buildings the site starts to speak for itself.



Displacement of **unstable areas** and **new projects.** These areas are most likely to face changes in the near future.

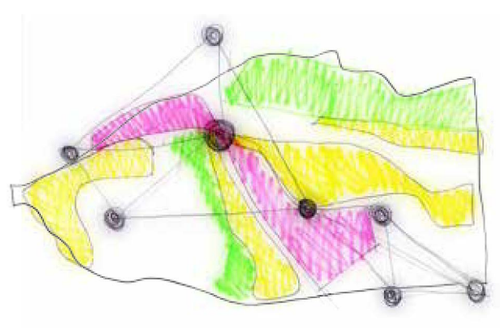
Development zone consists of unstable areas and new projects and is receptive to new urban solutions in creating better density and quality city spaces.

1.3. CONCLUSIONS FOR THE CONCEPT

In this part I will combine the layers of the analysis and justify the concept in the site. Sketches below explain and show how I worked my way to the conclusions where the concept derives from.

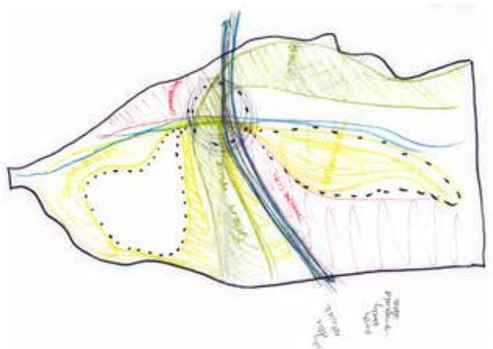
PRIORITAZING PROGRAMS

I have marked the residential area and tried to figure out how these areas could be integrated into the green network and what kind of mobility system would serve them the best. In my way of thinking these were one of the target groups I prioritized as I want to provide human scale urban structure for citizens instead of cars.



FINDING THE CORRELATIONS

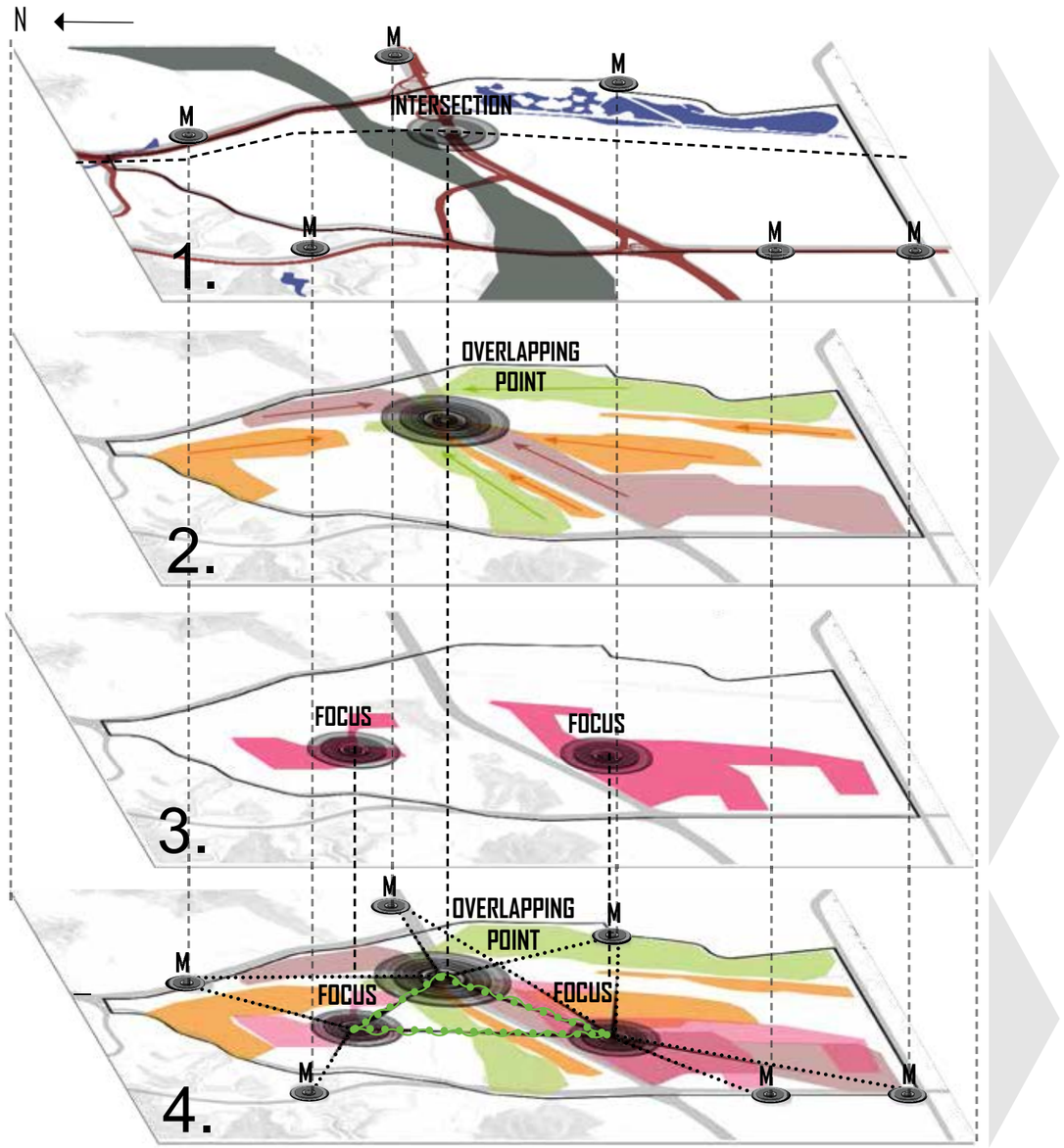
Residential areas are marked with yellow raster and commercial areas with pink raster and green areas with green color. From this sketch I found out the main starting point for the concept known as the overlapping place. To include the mobility network and see how it could be better I added the existing metro stations in the map. Furthermore, I studied the relations they now provide and reflected how they could be linked to the overlapping place.



HIGHLIGHTING THE BORDERS

Here the borders of the site are highlighted. From this map I found out that the overlapping point really links areas that are now isolated from each other by the mountains, arterial roads and the railway. In this draft there is a loop connecting overlapping places to the site equally but the arguments for the situation of loops were missing so in the next phase I added the layer of development zones and the network started to compose.

Axonometric layout of the most important zones found in the analysis that lead to the concept behind HUBit.



1. Borders in the site topography: water, large scale car roads, railways create walls between different areas that make pedestrian mobility complicated. However, different types of mobility are present, providing an opportunity for real access from place to place, where it doesn't currently exist. From this map, one can see the intersection of the highway and railway, which is an important access point for mobility to Shenzhen and Hong Kong by car or train.

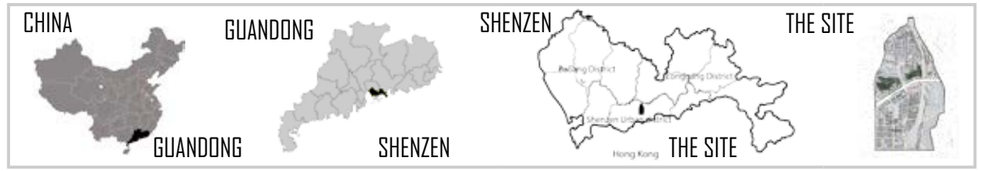
2. Even though the different functions are isolated, there is a point where residential, commercial and green zones and movements overlap. This overlapping point is highly relevant and a potential point for connecting and mingling movement, functions, and people to each other. The overlapping point is even more justified because of the access provided not only to local destinations but also to the center of Shenzhen and even by rail to Hong Kong or Shanghai.

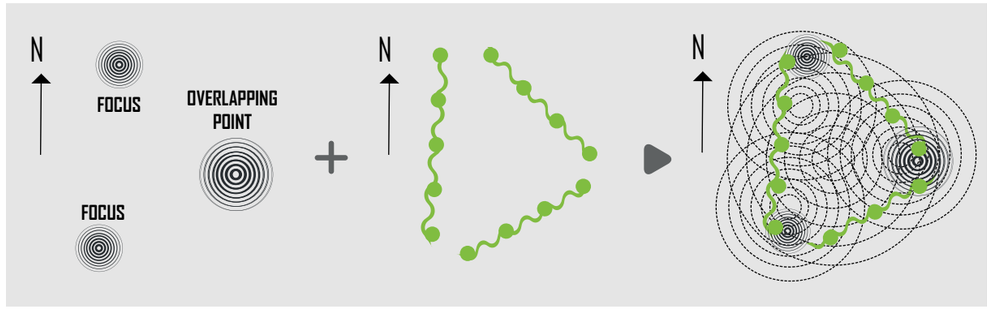
3. Development zones including unstable areas and new projects need to be taken into consideration when planning long term solutions for the future. The site is approximately 2, 5 square kilometers, and as a result, one focus point is not enough to provide a vibrant urban structure. In order to connect and mingle functions, people, and movement locally, development areas need local focus points to provide equal access to all citizens.

4. Combining the layers of existing transport nodes with the zoning analyses creates a base for new urban development to take shape. The overlapping place and possible new focus points in development areas act as generators for vibrant city life. As they join forces, the urban network starts to live and grow and movement begins to re-form. These new connections act as green corridors and are designed to support a functional human scale mobility network. Furthermore, when integrating the new transport system into the existing network, the possibility arises for movement not only within the system, but also with other regions.

2 DESIGN TOOLS

2.1. CONCEPT





Focal points generate interaction in city life that spreads to the city structure and gives identity to the area.

Interaction needs resilient links in order to enable the mobility network to evolve into a complex system that adapts to time and space.

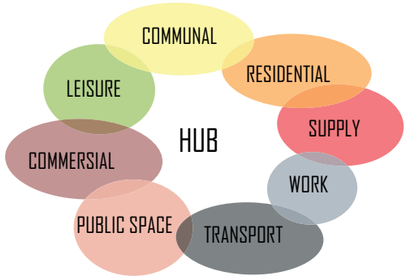
Resilient links and interactive focal points create strategy for city to develop into vibrant and connective urban structure.

HUB

LINKS

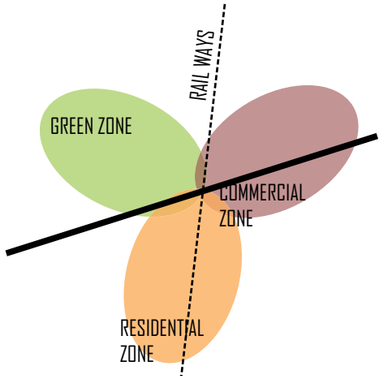
INTERACTIVE CITY

N



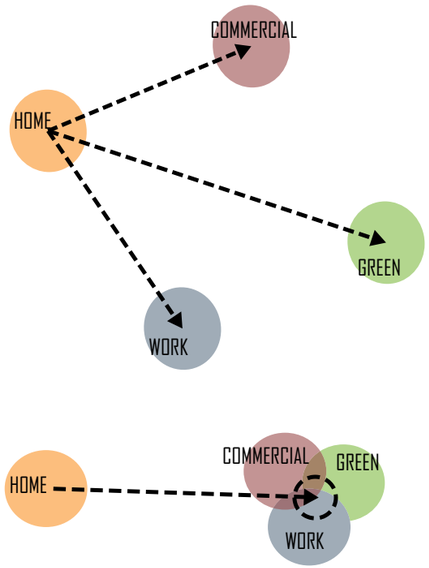
WHAT

Vibrant and complex structure where transportation, logistics, information networks and functions come together, creating efficient spaces, both economically and environmentally.



WHERE

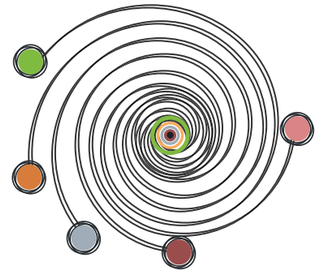
The overlapping point where a hub starts to evolve. The idea behind the hub concept is to enliven the area and activate mobility between different functions with local centers. These centers act as landmarks to activate regional identity.



WHY

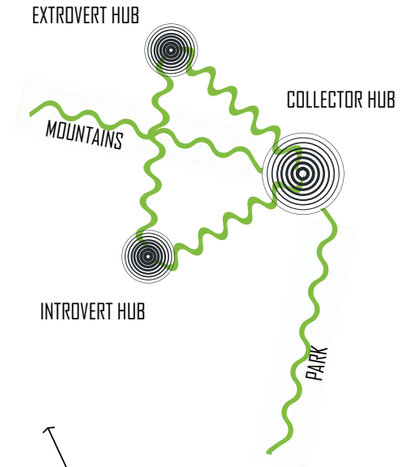
Commuting dominates peoples' lives if functions are situated separately. Mingling functions together in hubs shortens distances between activities, diminishing pollution and the need to commute. Centralizing functions brings people together and is a socially sustainable solution.

N



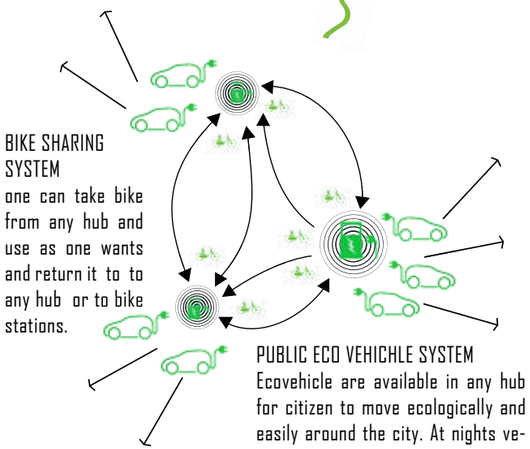
WHAT

Hubs trigger the movement to grow and circulate into the city space, creating a mobility network which allows continuous movement and activates new loci points.



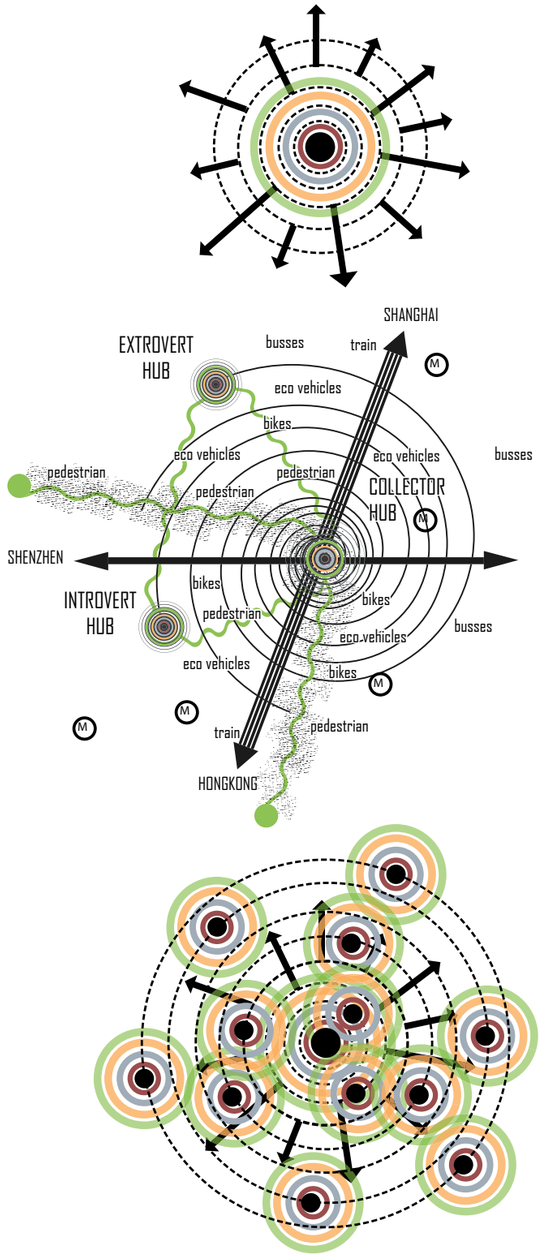
WHERE

The mobility network starts to adapt from links between hubs and continues to establish new urban access according to future needs. Mobility network is not only for creating roads to destinations but it also provides sceneries of urban and green city life along the way.



HOW

City's infrastructure shapes peoples' movement and movement shapes the city. The new transit systems provides many ways for people to move safely and sustainably to realise their city life. As new transit systems are accepted among the citizens, they start to shape the urban structure.



WHAT?
The hub acts as a livable core that starts to breathe life into its surroundings, revitalizing the whole area step by step. Hub reflects different layers of city life and answers the need for better densification.

WHERE?
Diversity of transition modes creates new mobility systems that shape urban forms and promote opportunities for growth. Links create the connections both on an interregional and international scale to ensure accessibility from walk ability to mass transit modes.

HOW?
Hubs and link strategies create a resilient network that evolves like a bicycle wheel that circulates in time and space. As a consequence, the network is adaptable and continues to grow in the future.

2.2. STRATEGY

HUBit is flexible strategy for Shenzhen's suburb in Sungang Qingshuihe to develop

- RESILIENT CITY STRUCTURE

Focus points according to needs for centralizing programs

- SOCIALLY LIVABLE CITY

Mobility systems to link people and places

- ACCESSIBLE CITY FOR ALL

The strategy for improving mobility and the urban structure is to design community generator hubs that draw attention and activities from the surroundings, igniting new movement within the city space. Hubs create a rhythm to the whole area, giving delightful scenes to walkers, bikers, drivers, and all other passersby. Proposed hubs not only create mobility by adding transport nodes, but also create new and inviting public spaces for commuters to hang out and attract businesses, creating commerce. It has been acknowledged that the context of the site could require cultural or local understanding, so all hubs are situated in spaces between the existing buildings to honor the built environment. In addition, those spaces are crucially important elements that shape and activate the city life. Functions within the hubs can adapt to the site's demands in time and in space. Hubs are social networks that merge virtual and physical places, creating interactions between urban areas, spaces and people.

Thus, the hubs grow through the development of their surroundings and due to peoples' needs and actions. At the same time the network expands from the overlapping point due to peoples' interaction between the urban structure. As the mobility between the built environment arouses new loci for mobility and interaction, a new spot for a new hub starts to takes its place.

From a social aspect, hubs and mobility networks bring people together, creating social centers and meeting places. Sustainability is taken into consideration on every level. Centralized functions and actions minimize movement and land usage throughout the day, and create an economically sustainable solution. This is a resilient strategy for the city to develop and the environment to adapt, opening a new discussion on environmental sustainability. Combining functions in an adaptable environment is socially, economically, and environmentally sustainable.

2.2. TEMPORAL DIMENSIONS

Isolated areas segregated by topography, large scale roads and rail ways. The goal is to improve the connections and to create a human-scale city space.

The Collector Hub begins to grow from the overlapping place to the city space, connecting segregated areas and bringing people together.

The Extrovert Hub springs up to support and strengthen the network triggered by the Collector Hub's and shorten the distances in the city structure.

The South part still lacks a local center for providing equal access to the activities that hubs facilitate. As a consequence The Introvert Hub comes up.

Hubs and mobility systems create an entity that reflects to existing city structure and nodes (metro stations) and correlate to future needs.

A resilient city structure, where people have multiple choices for motion and possibilities for making the change towards sustainable environment is created when the hubs come together and promote engagement from citizens.

3 DESIGN

3.1. DESIGN PROPOSALS

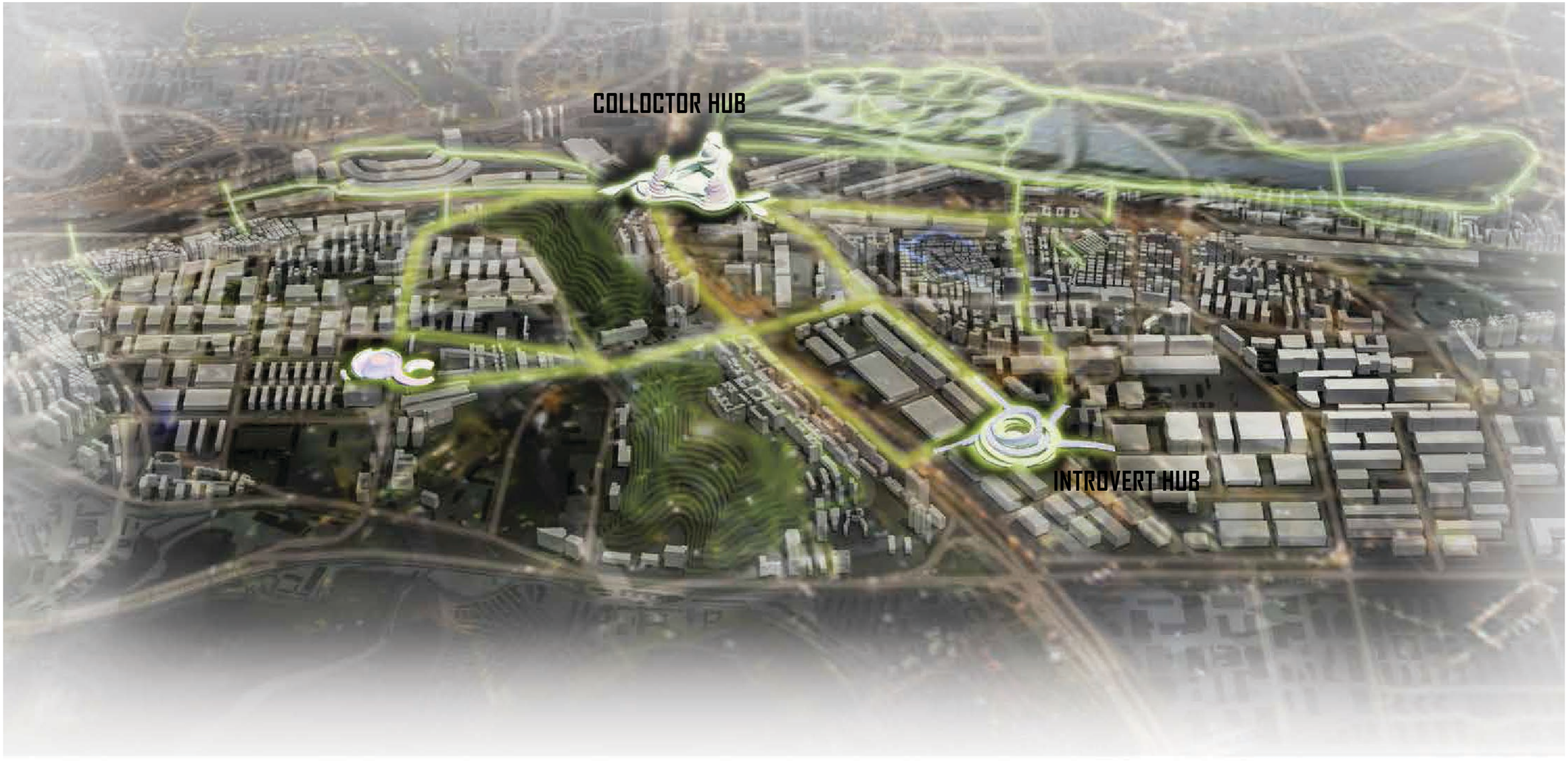
"It would be wonderful if the shapes of our cities maximized the utility for everyone"
(Charles Montgomery 2013, s.233)

Unfortunately the world does not work like expressed above. In fact cities are actually shaped by various struggles between competing groups of people. And usually this leads to unequal development when change happens by people who have the power while the people who don't have power also don't have a say. Suddenly, the whole soul of the city is categorized by the benefits they bring to the people with the power. I believe that spaces that allow for and promote multiple purposes paired with mixed programs can prevent this situation from arising. The pressure is on planners who need to promote equality and find solutions that would satisfy all of the needs. It doesn't sound like a realistic goal to achieve, but the solution is adaptability. If a space can change to serve different needs that are required, cities can become more equal and open to all. The Hub is a complex hybrid building which combines people, creates possibilities for social interaction, and moves people from place to place, while providing amenities and residential solutions.

Hubs focus on the flow of movement between interior and exterior spaces both in the public and private realm. The emphasis of the design of the hubs is upon working with people and space, particularly looking at the notion of place, but also place identity and genius loci. As such the design covers a variety of scales to communicate design intentions that help with the identification and determination of place.

The hubs' growth principles lie in spatial adaptability that serve more than one function. The design is not locked to the specific place but it can be situated anywhere that it is needed according to needs of the city and its people. The hubs grow and expand accordance with the flow of movement aroused by people. Ultimately, hubs can be seen as the glue that attaches traditional built environment to the design of the hubs.

The buildings themselves that make up the hubs are part of the mobility flow with continuous ramps that combine different levels of city life. Buildings reinforce the movement from outside in and from inside out to the surrounding region. Thus, the spatial qualities follow the movement while spaces form and take place along the way within the buildings. The network arouses the hub to start to develop and as movement flows in the specific space the built spaces start to develop for citizens to utilize. Hub buildings act as a path that facilitates the vibrant everyday life of the commuters and inhabitants.



DESIGN PROPOSALS FROM ABOVE

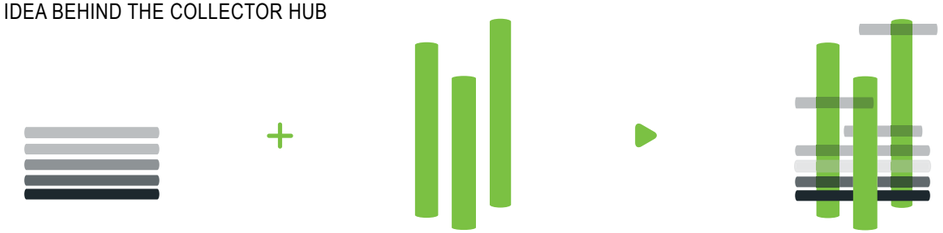
The main hub The Collector is situated in the overlapping place where functions and activities and mobility come together. The Collector Hub starts the process of resilient strategy to create vibrant and human-scale urban structure and to enable continuous movement flows in the city.

This process generates new hubs and in this concept they are shown to be situated in development zones where there is empty space. They are labeled as “Extrovert” in north and as “Introvert” in south. In reality, the new hubs are situated where they are needed, allowing mobility to circulate around them and in them.

THE COLLECTOR HUB

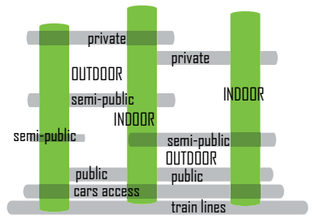
The Collector hub is the biggest of these proposed hub buildings because of its position and function. It is situated on top of the extensive cross-section of large scale road and railway to give access from all sides. It acts like a collector road that is moving traffic from local streets to arterial roads to provide access to residential properties. The idea behind the collector hub is basically same as the others, to give access, but to give access for pedestrians to the areas surrounded it, especially to residential areas that need the better mobility connections as the site is more or less designed for cars and trucks importing and exporting products. The building acts as a tremendous bridge above the car and rail traffic. Building masses rise from the different sides of the intersection without destroying the existing buildings.

IDEA BEHIND THE COLLECTOR HUB

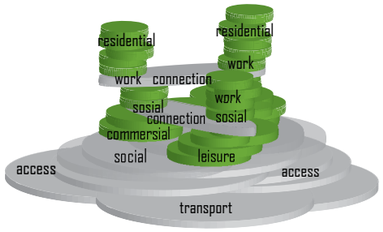


The Collector hub does not only give access, but also merges the functions of the areas around the cross section. It consists of platforms that repeat the functions of the neighborhoods, linking them to create new functions and transport modes. The ground platforms are wide and attached to ramps that enable people to enter the entrance square, connecting the three towers around it. The main difference with other hubs is that here one can access the train and reside on the top floors. This ensures the use of the building is maximized from morning till night.

The Idea is that everyone goes through the spacious and collective entrance hall that is found to be suitable for various activities. This center, surrounded by towers, is enclosed from the sides in such way that one cannot hear the noise of cars and trains underneath it. However, the sunlight can reach the market place and the city itself can be seen in the center reflected from the glass facades of the towers. From this entrance hall, people continue to their destination via ramps that circumvent all of the towers, narrowing towards the top. In The Collector Hub, movement circulates from public to semipublic while rising to the top floor private platforms. The building enables people to see their neighborhood in a whole different perspective while going up, with the possibility to discover something that they have not yet discovered. The hub is a sort-of walk through a city as the round shaped glass facades reflects the city and as the built structures frames the scenes. Spaces in the towers are designed to be free and able to be used for multiple functions.

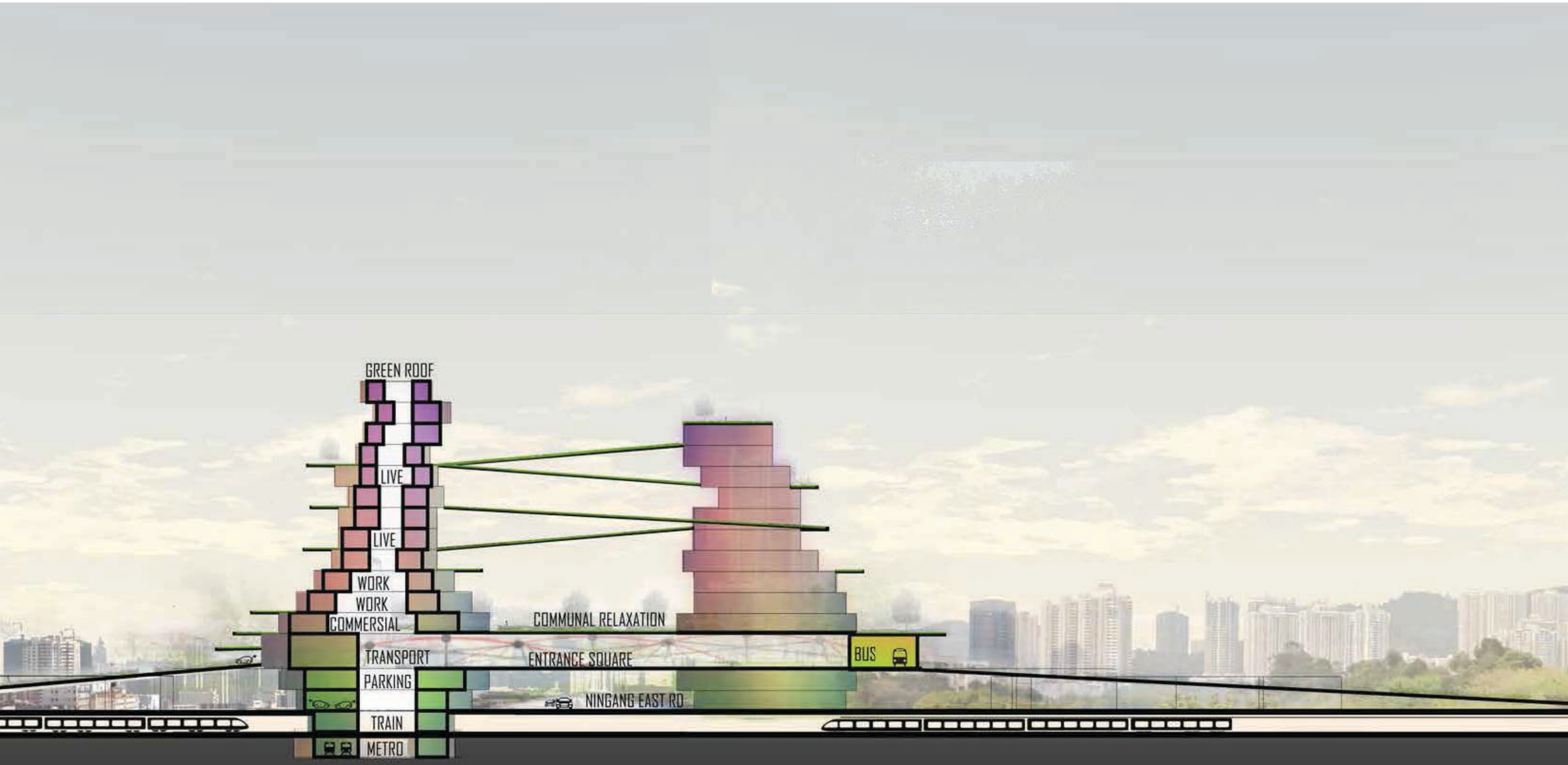


The functional principles of movement and privacy in the building system.



Platforms take shape and connect multifunctions as a consequence The Collector Hub forms.

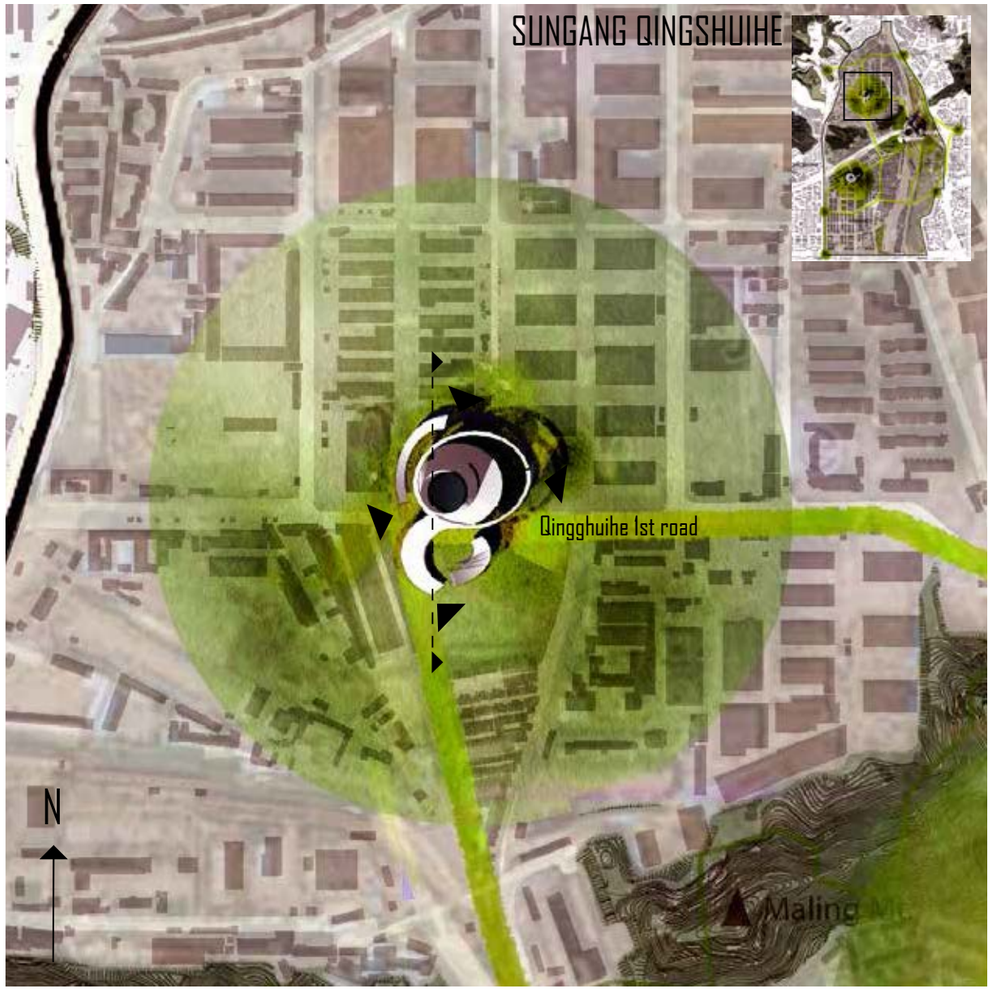
Even though the building towers over its surroundings, the glass, wood, and green roofs and walls are not so heavy that they detract from the surroundings, but still attract attention to what was once an area populated solely by warehouses, factories, and the like. The inspiration behind the masses in the Collector hub derived from the hills nearby. The design that combines building towers in that specific composition with green walls and roofs reassert the characteristics power of the hills.



DIAGRAMATIC SECTION FROM THE COLLECTOR HUB 1:1000

THE EXTROVERT HUB

The Extrovert Hub is situated on the north side of the mountains where building volume and density are slightly lower. The local center creates an identity of communal recreation in the neighborhood. Now the specific plot is a non-place that is desolated and uninhabited, left between roads. This spot is situated along the only road that leads to the north side of the competition site, so in a way it could act as an entrance or a gate to the area in the North. This idea follows the Chinese cultural ideology as its heritage is recognized for its gates. The building consists of outdoor and indoor spaces that mingle public and private spaces to diminish the hard borders of private and public spaces in Chinese culture. The idea is to create action from the inside out that flows to its surroundings, activating and rejuvenating the whole North side.



Extraversion is *"the act, state, or habit of being predominantly concerned with obtaining gratification from what is outside the self."* (Merriam Webster Dictionary)

Extraverts tend to enjoy human interactions and are energized and thrive off of being around other people. They take pleasure in activities that involve large social gatherings.

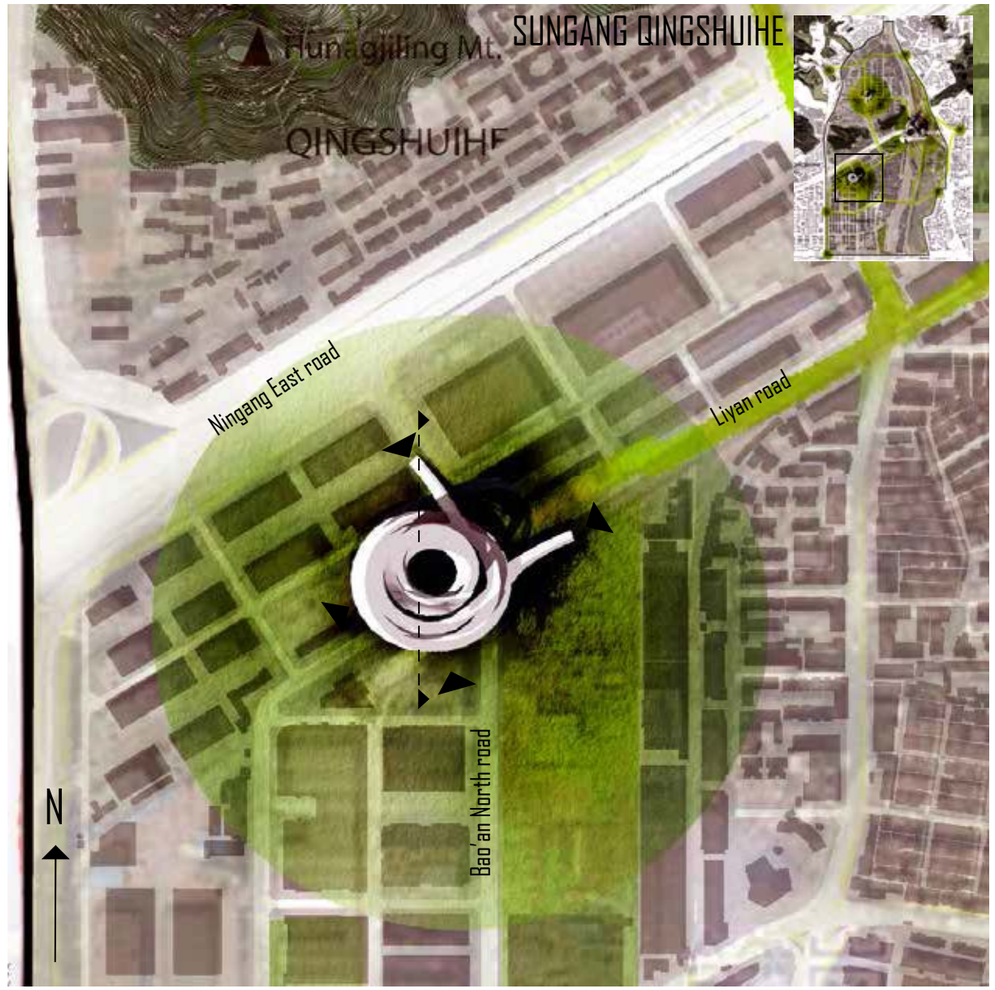
The Introvert hub is characterized as the definition of an extravert person. The design and volume of the building is extroverted, in accordance with the name. The Extrovert Hub is composed of several buildings which literally spread to their surroundings, prioritizing open space. Orientation, mass, and height of built forms reduce as you move away from the center. It opens up to its neighborhood, combining outdoor and indoor activities.

Extrovert covers Qingghuihe 1st road so that cars can move below the building and pedestrians above. The idea is that one can safely access different sides of the neighborhood, exploring and taking part in recreational activities along the way. Functions are a mixture of transport modes and diverse utilities such as urban farming, a public park, market place, commercial amenities, communal services, and cultural scenery.

DIAGRAMATIC SECTION FROM THE EXTROVERT HUB 1:1500

THE INTROVERT HUB

The Introvert Hub is situated on the south side of the mountains and Ningang East road. The southern part is more dense and active, allowing the cross section between Bao'an North road and Liyuan road to handle a bigger building mass. As there is no as much space available in the south part, the building needs to fit in smaller space and rise higher to fit to its surroundings. This building also allows pedestrian traffic over the building and the busy street below it, in order to create accessibility for all modes of movement. The hub act as pleasant meeting places and scenery for urban activities but also provide possibilities for private activities. Hub's the mass and volume reflect the principle of outside in movement. Curved volumes create a mass that derives as a continuous cycle around its center that is open green space for social interaction.

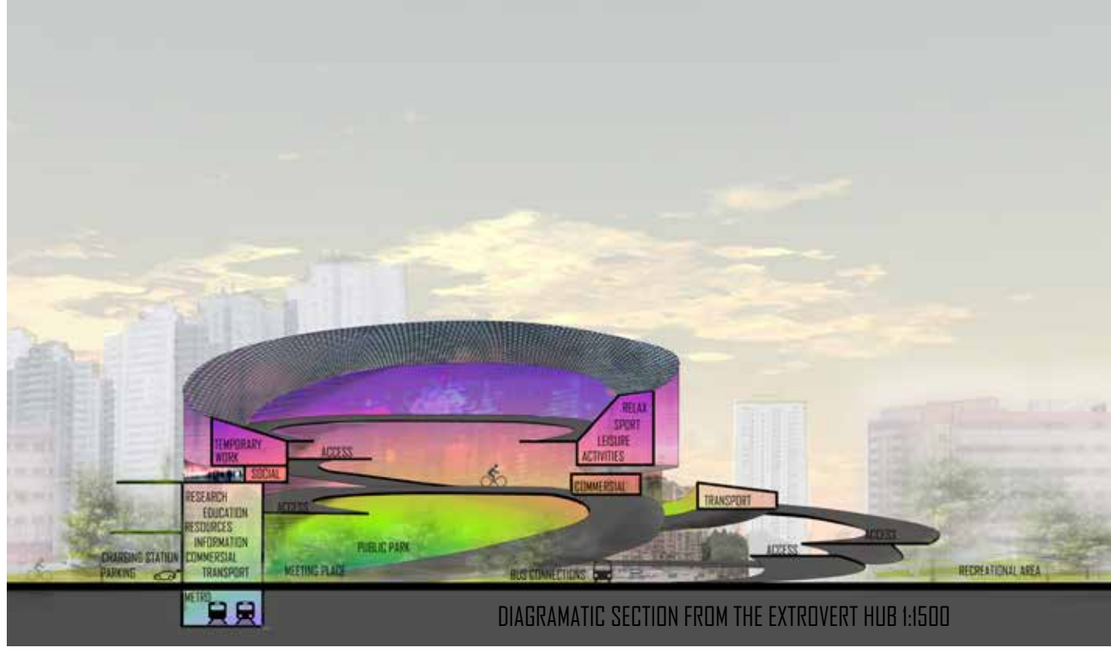


Introversion is "the state of or tendency toward being wholly or predominantly concerned with and interested in one's own mental life". (Merriam Webster Dictionary)

Introverts are characterized as people whose energy tends to expand through reflection and dwindle during interaction. They like to observe situations before they participate and prefer to concentrate on a single activity at a time. Introversion has been defined by Susan Cain in her book Quiet, to have a preference for a quiet, more minimally stimulating external environment.

The Introvert follows, as well, the definitions of introverted person. This hub is not as open as The Extrovert hub. The Introvert hub consists more of enclosed spaces for people to be able to have some private activities as well. This Hub does not open up to the city but the functional principles are the same in this building. Instead, the built forms draw people in with the ramps that connect it to the city space.

Functional principles still encourage social gatherings. On the other hand, indoor spaces are prioritized to enable activities to take place indoors. The functions of the Introvert derive from cultural, creative, leisure, sport and relaxation but also commercial amenities.



DIAGRAMATIC SECTION FROM THE EXTROVERT HUB 1:1500

3.2. TIME SPHERES IN THE CITY

The whole strategy of HUBit is based on Gehl's teaching about keeping distances short and making moving les intensive and safe. Charles Montgomery refers to this issue, but with a more practical approach by explaining how long people are willing to walk before they choose to take the journey by bike or by car. Bus stops need to be within a 5 minute walk and railway or tram stations within 10 minutes walk. This theory was taken into consideration in the design, attempting to lower the commute time for the average citizen. Even though all the hubs are not inside the ten minute walk, the paths facilitate services and interaction along the way, travel time does not seem so long as it would be in a normal car-oriented street. With equality as a goal, this was an attempt to create a network where every residential area is no more that 15 minutes walk to the hubs and no more than 10 minutes walk to facilities that the new mobility network will offer as it starts to develop after the hubs are established.

Due to the fact that person is willing to walk from 5-15 minutes without hesitation, this diagram shows what one can reach in this network of the hubs.

3.3. NETWORK BETWEEN THE HUBS

"We can literally walk our way into state of well-being." (Charles Montgomery 2013, s.188)

Montgomery points out through researches of human behavior introduced in his book, walking makes people more happy and energetic and at the same time, makes cities more pleasant.

As I've already explained the strategy of HUBit was to create focus points from where the movement starts to spread to the city. Movement, however, is not only referring to car traffic. What is meant by movement, is possibilities for human scale action to take place in city structure. The connections presented between the hubs are for light traffic and pedestrian movement as the site is already full of car oriented streets.

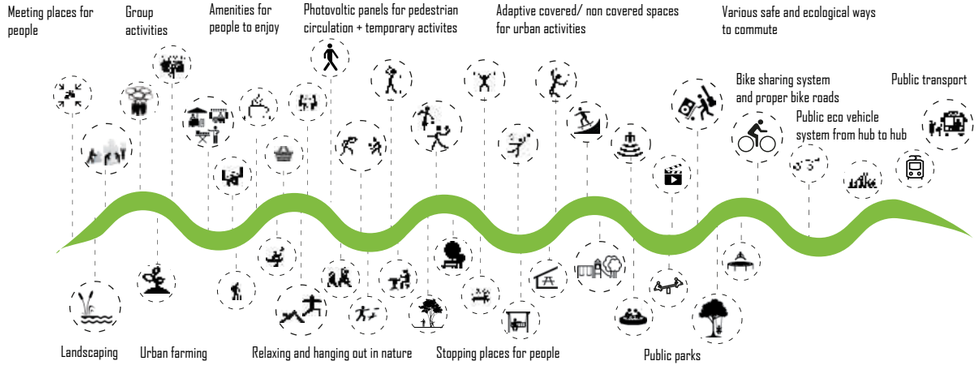
The network between the hubs favors travelers who use less space. To be more specific, streets that have bus-only lanes and doubled bike lanes with wide pavement. Cars may have one lane on the side of the street if necessary but otherwise they are pushed aside to arterial roads. Mobility network refers to the paths that facilitate diverse recreational services in the spaces between the buildings. While concentrating on intermediary movement, we must not forget how valuable passive enjoyment is in creating urban public spaces for people. Beyond transportation modes, mobility in this context refers to a promenade that gives opportunities for taking a break. When the speed at which one travels lowers, the experience and understanding of the city structure during the journey becomes more pleasant. Thus, walk ability is a key factor to good urban planning. The solution to a quality city structure is ease of movement and access to facilities in and around their neighborhood.

Cars take far too much space in the cities. In order to create pleasant city structure, car movement needs to be separated from the light traffic. In fact, according to Charles Montgomery's studies, cars need 30 times more space than a person standing or 7.5 times more than person with a bike or in a bus. What's more, the rates start to rise exponentially when we start moving. To design equal city structures, this needs to be acknowledged. One ought not to design according to needs of cars but according to equality in providing space for every mode of travelling. We already have successful examples of city structures such as Copenhagen, where space is shared more equally between cars and pedestrians and in the end that has created better city.

The idea is to decrease car movement by proposing car sharing systems that allow one to be free to move without having to own a car. By this system, I refer to an electric car system provided by the city that allows citizens to pay to rent the vehicle from a recharge station around the city. The Hubs will act as the first recharge stations and as the development goes on, the stations can spread all around the city, while even more vehicles can be provided with GPS system that frees the cars from specific stations. Precursors for this kind of systems are Velib and Autolib in Paris, Zipcar in USA, Canada and United Kingdom and Car2Go in Germany. In addition, in search of a way to encourage citizens of SQ to use bikes and be even more sustainable, a bike sharing system was introduced as well with stations in hubs as well as all over the city. Both of these solutions are new, but they are needed and believed to provide various possibilities for movement, so that people can start to make new decisions about how they want to move.

In this project, possibilities are created by linking places with more human-scaled paths. It must be acknowledged that new mobility systems require new infrastructure which does not necessarily provide value to car owners. However, it would move the cars further away from the active city centers, lowering speed limits and parking places, and essentially creating totally car-free zones. The pedestrians and cars will be on completely different levels, creating a safer environment for both parties involved. A strategic decision was made to let the development open, so no effort was made to go into detail in realizing the roads. That is something that can be done after the strategy and development have started to evolve to show the direction of movement in the city structure. Because transit systems shape our travel behavior and choices we make, the transit systems need to be more diverse before further improvement can take place. In a way cities shape our movement but also our movement changes the city.

DIAGRAM SHOWING THE POSSIBILITIES MOBILITY CAN CREATE



3.4. URBAN PUBLIC LIVINGROOM

VIEW FROM THE SOCIAL ENTRANCE SQUARE IN THE COLLECTOR HUB .

A view from the main hub, which is the Collector Hub, where everything comes together. This is the main center where one can explore the site by renting a bicycle or echo vehicle, or taking a metro to the city center of Shenzhen, to the areas around QS, or even take the train to Hong Kong or Shanghai. The hub also connects people to nature and green recreational spaces in the city while acting as a public living room for the citizens to stop and meet other people. This is how the hubs are meant to work as a public space; to revive the urban spaces between gated communities and other housing and industrial areas. Only the main hub is visualized because the others are supposed to develop according to the needs of the citizens and the surroundings. The main hub is designed as it is needed for the development to start and for the urban spaces to start to live again.

Conclusions

Self evaluation

SELF EVALUATION

This part evaluates the strengths and weaknesses of the project and reflects the challenges required in the competition. Self evaluation describes the consequences that follow when these specific methods are used in this specific project. The methodological tools used in this project are nodes, network, focal points, and connections between them. In this part the grounds for my methods is set and the project is subjectively evaluated.

OUTLINING THE ISSUES AND MY APPROACH AND TOOLS

The most difficult factor was the size of the site that made the scale so vast. This was by far the biggest design area that I have been involved with. It took a long time to understand the appropriate approach to the scale as a certain amount of time was given to complete the competition proposal. The challenging town planning tasks were given on behalf of the Schindler Group and I accepted them as tasks for my diploma work. However, I wished to give a solution that would create a uniform entity as it occurred that it is not good urban design if only a certain specific area is improved. Thus, I challenged myself to concentrate on finding a comprehensive solution that is believable and something that can be stood behind.
This led to analysis where the area was zoned according to its programs, characteristics and density. Through the rigorous analysis, the area started to function better as a whole and the meaningful and interesting scale was discovered. It was obvious that within the framework of a diploma work and given time, the strategic approach was the only suitable tool for creating a development plan that answers to the changing needs in the rapidly growing and changing city of Shenzhen and region of Sungang Qingshuihe. The vast scale did not allow the ability to zoom in on specific buildings or places in the district that could have been interesting as well, but according to professional urban planning ideology the adaptable strategy was much more beneficial for the regeneration and improvement of city structure.

All projects like this are extremely intractable and tricky, because they require pictures of the development improvements and usually the strategic approach does not provide such. However, somehow the benefits of the strategy needs to be shown but same time in a way that the zooming in does not stiffen the adaptability or violate the equal accessibility.

The book called Happy City written by Charles Montgomery was truly considered as a guide tool for creating the recreation strategy. The book deals a great deal about town planning in different contexts and themes. Montgomery's teachings and ideas of urban planning were justified as he discussed the challenges in megacities that identify with challenges that the district of Sungang Qingshuihe is dealing with. Montgomery talks much how cars have taken over the city and how people do not question how cities are designed and further more how they decide to act and move in the city space. He does not believe in machines or only technology to improve the cities in the world. He even reinforced my ideology that the people make the city vibrant by explaining the how slower movement of traffic is beneficial to market and commercial amenities. According to him, traffic that delivers the highest volume of people and goods is best for the city.

In other words, cities need human scale activities to be vibrant and inviting. My intentions in designing lie always in people as they are the resource that in the end shape the city space the most. I followed the principles of human oriented design as the approach of resilient strategy leaves development plan open for changes. Furthermore, the whole strategy derived from citizens' demands and needs which acted a big role in the process of HUBit. I believe that adaptability and flexible solutions are best way to give something to all. Yet, the volumes of the hubs were fairly big as the context requires it, the network and spatial ideas still lies in human oriented design.

A sustainable perspective was strongly behind the chosen tools and the project's strategy itself. Commonly, exact master plans do not produce sustainable urban structure while adaptable design strategies are better way to design urban structure where nature and the built environment are in harmony, producing social activity and in the end economic benefits. By following sustainable design principles I concentrated on adding activity to the spaces in between the built environment rather than conquering new regions or demolishing old city structure. The strategy that is introduced follows the ambition of sustainability but, just as every strategy, it needs further action in the future before it can co-operate with the existing city structure and mobility systems and work in reality. Hence, the strategy is only a theoretical plan which recognizes the goals for the regeneration and generates the future possibilities as an entity.

THE SCHEDULE

To understand the time and its limits even though you want to design everything was difficult task to handle. However, I was able to create such development strategy that I could present professionally and stand behind in given time. The competition trained me to prioritize, which is beneficial to know in work life. Doing a competition as diploma work was a natural and suitable solution for me because in competition there is always deadline that needs to be followed. I believe there is no point to work and work for the diploma work as it is not possible in real life either. One need to be able to finish some day and competition deadline makes it easier. I'm proud that I made the project look like a finished proposal in the time that was provided even though the task was demanding and in a totally new context.

PROJECT AS A LEARNING PROCESS

I have to admit that this competition was one of the best learning experiences that I've had during my studies as the scale forced be out of my own comfort zone. I'm really satisfied that I did not take the easiest path, and it was worth every feeling of frustration, stress and hopelessness. I'm proud of myself that I did not give up, kept to the competition timetable, and even held on to principles of proper urban planning. Even given the challenging scale and ambitious competition goals, I managed to control the scale by selecting the correct tools for the project. To go further, this project is to certify that architecture studies had provided the basic tools that provide a capability to apply the tools across the broader in professional field.

This competition reinforced my belief that challenges bring the best out of me. I've learned through this work how little I know and how much there is still to be learned. However, I'm not an exception among my colleagues. It is commonly known that the deeper you go in to one field, the more you acknowledge the amount of facts that you do not know. This learning process has yet to cease, but it is crucial in the phase of a diploma work to accept the facts, to keep the mind open for this development process and to go for it. This project was the most interesting learning process as I knew so little about the themes and the context before the competition. Yet, this most certainly intrigued my curiosity and desire to learn more and to broaden my cultural understanding outside of the Scandinavia and Europe. The best thing about being an architect is that you can learn new things everyday and that you will be never reach perfection.

By participating in this competition, I personally improved my visual skills while trying to provide pictures of the atmosphere and diagrams of the system to make people understand the idea behind the strategy of HUBit. Editing the panels and the visual appearance was a learning experience due to the fact that this time I couldn't explain the work, but the panels should explain the work by themselves. I was introduced to the rule "3 times 3", which is a tool for the layout to stand out from other panels. It means that panels should attract attention in three seconds and after that, provide a new layer of information that keeps the viewer interested for 30 seconds and after that, still keep the interest on for three minutes, which should give time to review the whole project.

THE ARCHITECTURAL ASPECT

As an architect I succeeded in solving the challenges by concentrating on finding potential spaces to regenerate the city as a whole in order to achieve the spatial qualities for different target groups and for different speeds of movement. The aim was to develop SQ's identity and connect potential places within the site and from the site to the city around it and even further to the global network. Thus, the potential of the site is recognized and the possibilities reinforced to reconnect the city structure as an entity that serves the citizens the best. However, the intention was to provide a conceptual strategy to find and study the patterns and principles for developing urban spaces in megacities such as Shenzhen. This strategic plan concentrates rather to the facts of the site and generates understanding of the possibilities than to purely designing buildings. Even though I illustrate the buildings, they are to be evaluated as mass concepts in the process of development. The point is to show an example of how the everyday urban life could look in the focus points and in addition, more importantly, what functions hubs could facilitate.

In addition, according to Montgomery, the strategic approach was correct as he brought up the term heteroscedasticity that is explaining that the bigger the group that's actions one is trying to predict the harder it is. "Cities should strive to embrace the complexity, not just in transportation systems but in human experience…" (Happy City p.203) Montgomery argues for new mobility not to be changed with machines but by change in the way we think. A variety of ways to move enables people to move freely and is the key for new mobility to develop. This was the idea behind my strategy as well. However, this new mobility theme left a secondary theme in my project, which concentrated more on the hubs and the function.

As an architect, I want to believe in making our world a better place. My desire is to change the urban surroundings to be more suitable for people and more resilient for the future changes. I hope that architects can create possibilities to start the development and that's what my project's strategy is about.

FINAL THOUGHTS

Some might question this diploma work for lacking zooming in but it was a conscious plan to leave this project as I handed it in to the competition, which was about finding new development strategies. I and my supervisor Markku Hedman both agreed that this project could be continued further. Nonetheless, for a diploma work the project HUBit is more than sufficient as the scale of the competition site was so vast and challenging.

If I had continued this project, I would have added more new ways to move and explain how the mobility network could be designed in practice. The strategy for better mobility is highly functional in the competition submission. Yet, it was hard to situate the roads as I did not want to make ultimate master plan for the area. Furthermore, I wanted that the roads find their way according to citizens needs in time and place. For further development I would show how to separate the human scale movement and car traffic from each other and point out that the strategy I have created can really provide human scale scenes in city structure and work in practice. Now everyone can imagine how it could work based on my diagrams that shows how the roads could be like. Still, the network is characterized as flexible complex system that creates human scale activities and changes with time and space.

I see the circle closing. After I started my architecture studies with high-flow architecture, I learned practical facts that started to affect my architectural designs. However, now in the end of my studies I was able to go with the flow and forget the facts and finish my studies with unconventional architecture proposal. This was an important learning outcome that showed me that one must be brave enough to go out of one's comfort zone. Sometimes it is even necessary to free yourself from the practical facts and let your imagination fly again. Altogether, I'm satisfied with the result as the process gave me so much and helped me to improve and grow as an architect.

APPENDIX

Competition panels (not in scale)

ANALYSE

PROGRAM ANALYZE

Development zone consists of unstable areas and new projects and is receptive to new urban solutions.

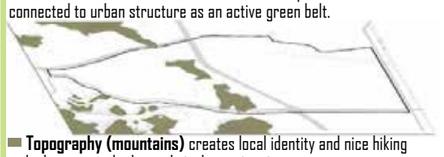
Displacement of **unstable areas and new projects.** These areas are most likely to face changes in the near future.

Commercial zone **residential zones** are optimal areas for human scale motion and for starting urban development.

Displacement of functions **industrial** **warehouses** **residential**
Different functions exists, but they don't correlate to each other or mix.

GREEN SPACE ANALYSIS

Green zone, that consists of mountains and parks, needs to be connected to urban structure as an active green belt.

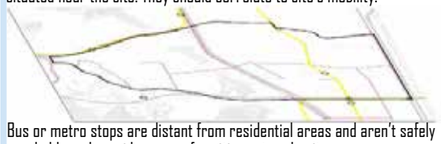


Topography (mountains) creates local identity and nice hiking paths but currently they only isolates sites into two parts.

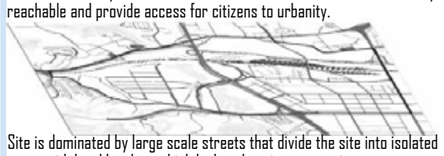
Parks and **other green spaces** can be found on the site but the green belt lacks safe human scale and connection to the urban life.

TRANSPORT ANALYZE

Existing metro stations are the only transport nodes that are situated near the site. They should correlate to site's mobility.

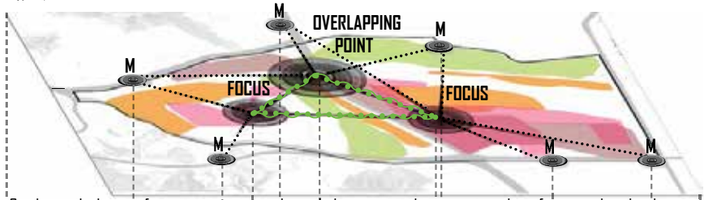


Bus or metro stops are distant from residential areas and aren't safely reachable and provide access for citizens to urbanity.



Site is dominated by large scale streets that divide the site into isolated areas with hard borders which lack pedestrian connections.

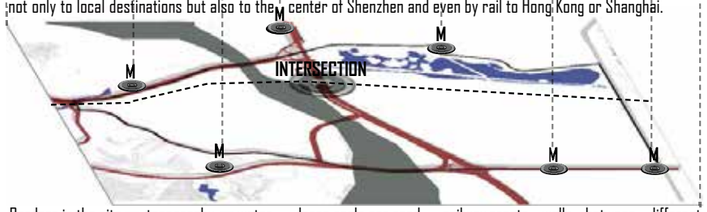
CONCLUSIONS



Combining the layers of existing transport nodes with the zoning analyses creates a base for new urban development to take shape. The overlapping place and possible new focus points in development areas act as generators for vibrant city life. As they join forces, the urban network starts to live and grow and movement begins to re-form. These new connections act as green corridors and are designed to support a functional human scale mobility network

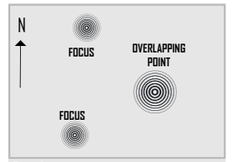
Development zones including unstable areas and new projects need to be taken into consideration when planning long term solutions for the future. The site is approximately 2,5 square kilometers, and as a result, one focus point is not enough to provide a vibrant urban structure. In order to connect and mingle functions, people, and movement locally, development areas need local focus points to provide equal access to all citizens.

Even though the different functions are isolated, there is a point where all the different functions and movements overlap. This overlapping point is highly relevant and a potential point for connecting and mingling movement, functions, and people to each other. The overlapping point is even more justified when because of the access provided not only to local destinations but also to the center of Shenzhen and even by rail to Hong Kong or Shanghai.



Borders in the site topography water large scale car road railway create walls between different areas that make pedestrian mobility complicated. However, different types of mobility are present, providing an opportunity for real access from place to places, where it doesn't currently exist. From this map, one can see the intersection of the highway and railway, which is an important access point for mobility to Shenzhen and Hong Kong by car or train.

CONCEPT

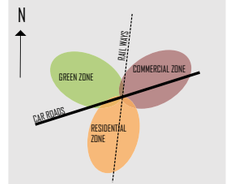


Focal points generate interaction in city life that spreads to the city structure and gives identity to the area.

HUB

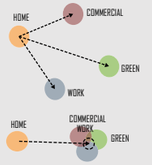
Vibrant and complex structure where transportation and functions come together, creating efficient spaces, both economically and environmentally.

CONCEPT IN PRACTICE



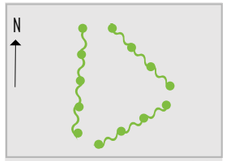
The overlapping point is the starting place where hubs starts to evolve and activate regional identity and mobility.

FUNCTIONAL PRINCIPLE



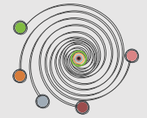
Centralizing functions brings people together and diminish commuting is a socially sustainable solution.

+



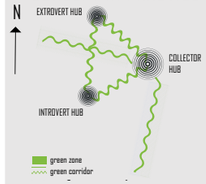
Interaction needs resilient links in order to enable the mobility network to evolve into a complex system that adapts to future.

LINKS



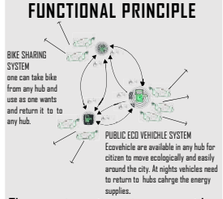
Hubs trigger the movement to grow and circulate into the city scape, creating a mobility network which allows continuous movement.

CONCEPT IN PRACTICE



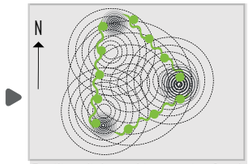
Mobility network is not only for creating roads to destinations but it also provides scenerys of city life along the way.

FUNCTIONAL PRINCIPLE



The new transit systems provides many ways for people to move safely and sustainably throughout the urban structure.

+

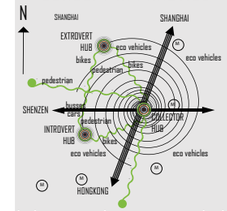


Resilient links and interactive focal points create strategy for city to develop into vibrant and connective urban structure.

INTERACTIVE CITY SCAPE

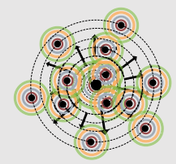
The hub acts as a livable core that starts to breathe life into its surroundings, revitalizing the whole area step by step. Hub creates better densification.

CONCEPT IN PRACTICE



Links create the connections both on an interregional and international scale to ensure accessibility in every scale.

FUNCTIONAL PRINCIPLE



Hubs and link strategies create a resilient network that evolves like a bicycle wheel that circulates in time and space.

The strategy for improving mobility and the urban structure is to design community generator hubs that draw attention and activities from the surroundings, igniting new movement within the city space. Hubs create a rhythm to the whole area, giving delightful scenes to walkers, bikers, drivers, and all other passersby. Proposed hubs not only create mobility by adding transport nodes, but also create new and inviting public spaces for travelers to hang out and attract businesses, creating commerce. It has been acknowledged that the context of the site could require cultural or local understanding, so all hubs are situated in spaces between the existing buildings to honor the built environment. Whats more, those spaces are crucially important elements that shape and activate the city life.
The Hub is a complex hybrid building which combines people and functions, creates possibilities for social interaction, and moves people from place to place, also providing amenities and residential solutions. The main hub that is The Collector is situated in the overlapping place where functions and activities and mobility come together. The Collector Hub starts the process of resilient strategy to create vibrant and human-scale urban structure. This process generates new hubs and in this concept they are shown to be situated in development zones where there is empty space. They are labeled as "Extrovert Hub" in north and as "Introvert Hub" in south. In reality, the new hubs are situated where they are needed, allowing mobility to circulate around them.
HUBit is a resilient strategy for the city to develop and the environment to adapt, opening a new discussion on environmental sustainability. Combining functions in an adaptable environment is socially, economically, and environmentally sustainable.

HUBit

RESILIENT STRATEGY FOR CREATING VIBRANT URBAN URBANITY IN QUINGSHUIHE

Global Schindler Award 2015 Access to Urbanity: Designing the City as a Resource Anna Heikkilä

PANEL 1

VIEW FROM THE SOCIAL ENTRANCE SQUARE IN THE COLLECTOR HUB

THE COLLECTOR HUB

The Collector hub is the biggest of these proposed hub buildings because of its situation on top of the extensive cross-section of large scale road and railway. Building masses rise from the different sides of the intersection without destroying the existing buildings. The building acts as a tremendous bridge above the car and rail traffic. The building consists of platforms that repeat the functions of the neighborhoods, merging them to create new functions and transport modes. The ground platforms are wide and attached to ramps that enable people to enter the entrance square from city space, connecting the three towers around it. In The Collector Hub, movement circulates from public to semipublic while rising, and finally on the top floor to private platforms. Even though the building towers over its surroundings, the glass, wood, and green roofs and walls are not so heavy that they detract from the surroundings, but still attract attention to what was once an area populated solely by warehouses, factories, and the like.

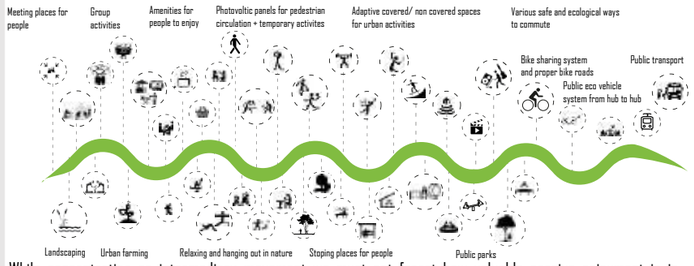
TIME SPHERES IN THE CITY

What one can reach in 5-15 minutes in the city spapce where the hubs influencing.

The functional principles of movement and privacy.

Platforms take shape and connect multifunction .

DIAGRAM SHOWING THE POSSIBILITIES THAT MOBILITY CAN CREATE



While concentrating on intermediary movement we must not forget how valuable passive enjoyment is in creating urban spaces for people. Beyond transportation modes, mobility in this context means a promenade that facilitates diverse activities and that gives opportunities for taking a break. When the speed at which one travels lowers, the experience and understanding of the city during the journey becomes more pleasant. Walk ability is key factor for good urban planning. The solution to a quality city structure is ease of movement and

CONNECTIONS

PHASES OF PROCESS

NOW	FIRST PHASE	SECOND PHASE	THIRD PHASE	FUTURE
Isolated areas segregated by topography, large scale roads and rail ways.	**The Collector Hub** begins to grow from the overlapping place to the city, combining segregated areas.	**The Extrovert Hub** springs up to strengthen the Collector Hub's network and shorten the distances in the city.	For providing equal access to the activities that hubs facilitate, **Introvert Hub** comes up to activite the south part.	**Hubs and mobility strategy** reflects to existing city nodes and correlate to the future needs.

EXTROVERT

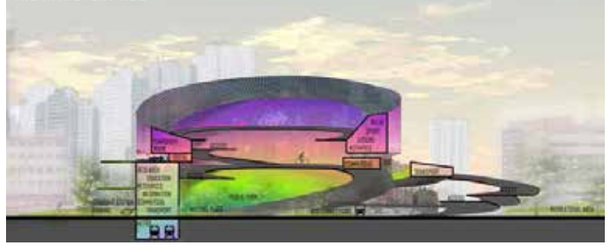
The Extrovert Hub is situated on the north side of the mountains where building volume and density are slightly lower. The local center creates an identity of communal recreation in the neighborhood. The design and volume of the building is Extroverted, in accordance with the name. The Extrovert Hub is composed of several buildings which literally spread to their surroundings, prioritizing open space. Orientation, mass, and height of built forms reduce as you move away from the center. It opens up to its neighborhood, combining outdoor and indoor activities. Extrovert covers Quingshuihe road so that cars can move below the building and pedestrians above. The idea is that one can safely access different sides of the neighborhood, exploring and taking part in recreational activities along the way. Functions are a mixture of transport modes and diverse utilities such as urban farming, a public park, market place, commercial amenities, communal services, and cultural scenery.

INTROVERT

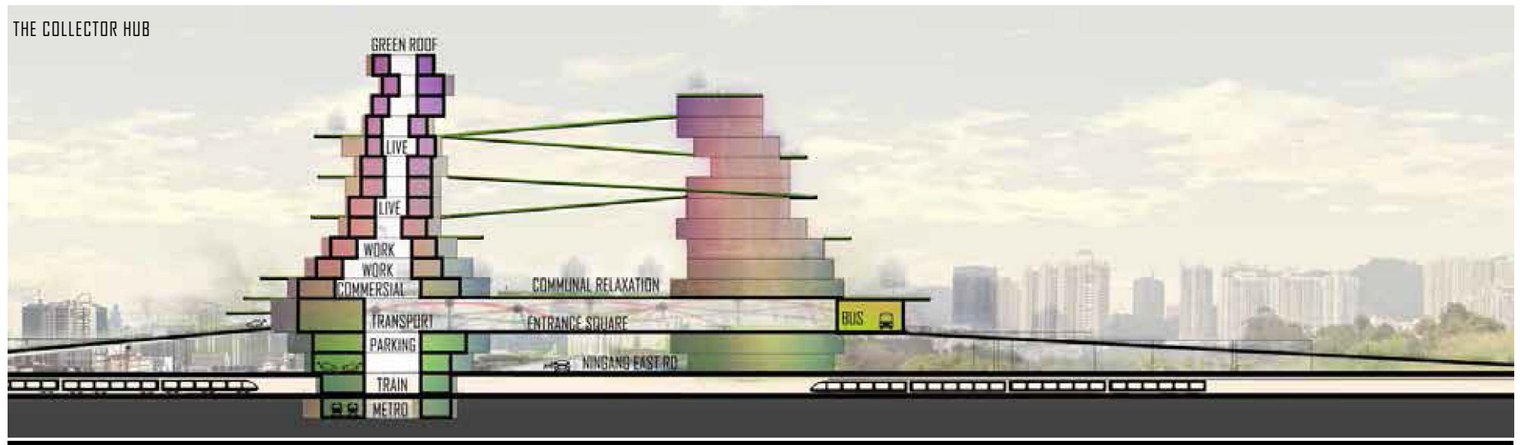
The Introvert Hub is on the contrary, situated on the south side of the mountains and Ningang East road. The southern part is more dense and active, allowing the cross section between Bao'an North road and Liyuan road to handle a bigger building mass. Functional principles are the same in this building, but in this center, the built form is prioritized, and activities are encouraged to move indoors. This building also allows pedestrian traffic over the building and the busy street below it, in order to create pleasant meeting places and sceneries for urban activities. The Introvert's functions concentrate more on indoor activities and private space.

THE EXTROVERT HUB

THE INTROVERT HUB



THE COLLECTOR HUB



HUB it

RESILIENT STRATEGY FOR CREATING VIBRANT URBAN URBANITY IN QUINGSHUIHE

Global Schindler Award 2015_Access to Urbanity: Designing the City as a Resource _ Anna Heikkilä

PANEL 2

BIBLIOGRAPHY

LITTERARY

Nieminen, Sara (2012). Chinese Superblock: A Study and Design Tools for Sustainable Urban Development in China. Degree Programme in Architecture, Tampere University of Technology.

Jäntti, Aku-Ville (2014). Eteläportti: Ideasuunnitelmia valtateiden risteysalueelle. Arkkitehtuurinlaitos, Tampereen teknillinen yliopisto.

Alppi, Samuli; Ylä-Anttila, Kimmo (2007). Verkostourbanismi.

Montgomery, Charles (2013). Happy City: Transforming Our Lives Through Urban Design. Penguine books, England

Jalkanen, R. ; Kajaste, T. ; Kauppinen, T. ; Pakkala, P. ; Rosengren, C. (2004). Aluesuunnittelu. Tammer-Print Oy. Tampere

Wall, Ed; Waterman, Tim (2010) Urban Design. Ava Publishning Sa, Switzerland.

Asensio, Paco; Bahamón Alejandro; Raventós, Eva; Campello, Alex; Casanovas Soley; Mireia; Granero Navarro, Christina (2005). Ultimate landscape design. teNeues Publishing Group, Spain.

Gehl, Jan (1987). Life Between Buildings: Using Public Space.Isalnd Press, Island.

Gehl, Jan; Gemzøe, L. (2000). New City Spaces. The Danish Architectural Press. Copenhagen.

Gehl, Jan. (2010). Cities for People. Island Press, Island.

Salingaros, Nikos. A. (2005). Principles of Urban Structure. Techne Press, Amsterdam, The Netherlands.

WEBSITES

One Planet Living. http://www.oneplanetliving.com/index.html

Wikipedia in English: introvesrsion, extroversion, hub

City-HUB: Innovative design for efficient urban transport interchanges. www.cityhub-project.eu.

Transbay;Transit Center Project in San Francisco. http://www.architecturelist.com/2010/01/27/transbay-transit-center-project-in-san-francisco/

BIG; “The Red Line,” a Link Between City and Nature in Finland. http://inhabitat.com/big-wins-competition-to-design-the-red-line-a-link-between-city-and-nature-in-finland/

PICTURES

Global Shindler Award 2015. Photograps and maps from the site. P.13-16 and p.29

Nieminen, Sara (2012). Vibrant city diagram based on Gehl. P.19

Gehl, Jan (2010). Principles of planning cities for people diagram. P.20

The biological basis of resilient cities by Michael W. Mehaffy & Nikos A. Salingaros http://www.theecologist.org/green_green_living/2234983/the_biological_basis_of_resilient_cities.html